AC-14-000-8682

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 30

OFFICE OF CONGRESSIONAL
AND INTERGOVERNMENTAL RELATIONS

The Honorable David Vitter
Ranking Member
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Vitter:

Thank you for your April 24, 2014, letter to the Environmental Protection Agency in which you requested responses to Questions for the Record following the April 8, 2014, hearing before the Committee on Environment and Public Works entitled, "Hearing on the Nomination of Janet G. McCabe to be the Assistant Administrator for Air and Radiation of the U.S. Environmental Protection Agency (EPA), Ann E. Dunkin to be the Assistant Administrator for Environmental Information at EPA, and Manuel H. Ehrlich, Jr. to be a Member of the Chemical Safety and Hazard Investigation Board."

The responses to the questions are provided as an enclosure to this letter. If you have any further questions, please contact me, or your staff may contact Josh Lewis at lewis.josh@epa.gov or (202) 564-2095.

Sincerely,

Laura Vaught
Associate Administrator

Enclosure

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OFFICE OF CONGRESSIONAL
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The Honorable Barbara Boxer
Chairman
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Chairman Boxer:

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Environment and Public Works Committee Hearing
April 8, 2014
Follow-Up Questions for Written Submission

Questions for McCabe

Questions from:

Senator Boxer:

1. The Office of Air & Radiation will devote significant resources to implement the President's Climate Action Plan which calls for using the Clean Air Act to set limits on carbon pollution from cars, trucks, and power plants. Over the Clean Air Act's forty-plus year history can you describe the benefits that the Act has provided to the nation's health and economy and how the EPA's carbon pollution standards will provide similar benefits?

   The Clean Air Act has a proven record of progress dating back to 1970. According to a 1997 EPA Report to Congress, the first 20 years of Clean Air Act programs, from 1970 - 1990, led to the prevention in the year 1990 of:

   - **205,000 premature deaths**
   - **672,000 cases of chronic bronchitis**
   - **21,000 cases of heart disease**
   - **843,000 asthma attacks**
   - **189,000 cardiovascular hospitalizations**
   - **10.4 million lost I.Q. points in children - from lead reductions**
   - **18 million child respiratory illnesses**

   In 1990, the Act was revised with overwhelming bipartisan support and signed into law by President Bush. A peer-reviewed, follow-up study to the 1997 EPA Report to Congress that covers the 1990 to 2020 period was published in 2011. The 2011 study includes a set of central estimates indicating that for the year 2010, the 1990 amendments and associated clean air programs prevented:

   - **160,000 premature deaths**
   - **54,000 cases of chronic bronchitis**
   - **130,000 cases of heart disease – acute myocardial infarction**
   - **1,700,000 cases of asthma exacerbation**
   - **86,000 emergency room visits**
   - **3,200,000 lost school days**
   - **13,000,000 lost work days**

   Furthermore, a recent EPA air quality trends report and associated data indicate that from 1970 thru 2012, emissions of six common pollutants fell by 72%, while gross domestic product grew 219%, vehicle miles traveled has increased by 165%, and population grew by 53%. These findings clearly demonstrate that economic growth and environmental protection can go hand in hand.

   Other particularly noteworthy benefits of the Clean Air Act's 40 year history include significant reductions in the number of people living in areas designated nonattainment for health-based air quality standards; dramatic reductions in ambient levels of lead (Pb) that have improved the neurological health of our children; significant reductions in acid deposition resulting in improvements in the health of lakes, streams, forests, and

ecosystems; substantial reductions in emissions and exposures to a wide range of hazardous air pollutants; and phase-out of the most harmful ozone-depleting chemicals resulting in reductions in skin cancer and cataracts.

2. Prior to the EPA proposing any new national ambient air quality standard the Agency goes through a thorough and exhaustive process to ensure the peer-reviewed science, opinions of all stakeholders, and the views of the general public are heard and considered. Could you please describe the process and numerous steps the Agency takes during the setting of these air pollution standards that ensures any interested party has full opportunity to submit opinions and substantive information to the agency before any decision-making is completed? Will you ensure this rigorous process is followed in future rulemakings?

   The Clean Air Act directs EPA to set National Ambient Air Quality Standards (NAAQS) at a level requisite to protect public health with an adequate margin of safety and the public welfare from any known or anticipated adverse effects of air pollutants. These standards are required by statute to be based on consideration of the most up-to-date scientific evidence and technical information, and advice from CASAC, a scientific peer-review advisory panel. EPA provides opportunities for public comment at every stage of the process. EPA begins the review process by issuing a public call for new scientific information. EPA posts and solicits comment on each iterative draft of all the critical scientific documents (the Integrated Science Assessment, Risk and Exposure Assessments, and Policy Assessment) which underlie a decision whether or not to revise a NAAQS. Commenters are encouraged by EPA to submit these comments not only to the agency but to CASAC as well. Thus, EPA provides multiple opportunities for public comment even before it publishes a proposed regulatory action. In addition, with every NAAQS, as with all major air rules at EPA, EPA includes in the docket all information on which the proposed rule is based, and the public has the chance to comment on that information and on the proposed rule at a public hearing and through a written public comment period. EPA responds to all comments before issuing a final rule.

   EPA is committed to reviewing the NAAQS in a transparent process, based on the best available science and consistent with the requirements of the Clean Air Act. I will ensure EPA follows this process for all NAAQS rulemakings that take place while I serve as Assistant Administrator.

Senator David Vitter

1. Would you agree that efficiency improvements could be a cost-effective way to lower CO_2 emissions from existing power plants? What is EPA doing to remove barriers to efficiency improvements caused by your New Source Review program?

   EPA agrees that efficiency improvements can be a cost-effective way to reduce CO2 emissions. The Clean Power Plan identifies efficiency improvements at fossil-fuel fired units as one of the building blocks of the best system of emission reduction for existing power plants. Under the proposed Clean Power Plan, states and units can work together to decide what kind of efficiency upgrades and emission changes might occur at a particular source. As a result of such flexibility and anticipated state involvement, EPA expects that a limited number of affected sources would trigger NSR when states implement their plans. EPA is requesting comment on whether, with adequate analysis and support, the state plan could include a provision that sources would not trigger NSR when complying with the standards of performance included in the state's Clean Power Plan.

2. Under President Obama's direction, your office is working to release new greenhouse gas regulations on existing power plants by June 1st. This has never been done before, and the rules have the potential to be among the most complex and costly in EPA history. While I am obviously concerned about the economic impacts of these rules, I am equally concerned about what appears to be a rushed rulemaking timeline that doesn't allow for those impacts to be fully considered. Take small business for example. The Regulatory Flexibility Act requires EPA to evaluate how its rules could impact small businesses.

   a. Would EPA agree that the existing source proposal has the potential to impact small businesses?

   b. Does EPA plan to convene a small business advisory panel under the Regulatory Flexibility Act to evaluate how the rule could impact small businesses and consider less burdensome alternatives?

   The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

   The EPA is aware that there is substantial interest in the proposed rule among small entities, including municipal and rural electric cooperatives. As detailed in Section III.A of the preamble for the proposed Clean Power Plan, the EPA has conducted an unprecedented amount of stakeholder outreach on setting emission guidelines for existing EGUs, including numerous meetings with municipal and rural electric cooperatives. While formulating the provisions of the proposed rule, the EPA considered the input provided over the course of the stakeholder outreach. Section III.B of the preamble of the proposed Clean Power Plan describes the key messages from stakeholders. In addition, as described in the RFA section of the preamble to the proposed standards of performance for GHG emissions from new

EGUs (79 FR 1499–1500, January 8, 2014), the EPA conducted outreach to representatives of small entities while formulating the provisions of the proposed standards. Although only new EGUs would be affected by those proposed standards, the outreach regarded planned actions for new and existing sources. We invite comments on all aspects of the Clean Power Plan proposal and its impacts, including potential impacts on small entities.

The proposed Clean Power Plan does not impose any direct obligation on specific plants. States will design and implement plans to meet their CO2 reduction targets and will be able to tailor those plans to address their particular needs, such as those of small businesses. However, as noted above, EPA has conducted an unprecedented amount of stakeholder outreach and will continue to gather input from a range of interested parties, including small entities and municipal and rural electric cooperatives.

Because the proposed rule does not impose any specific requirements on any specific sources, including small entities, it will not have a significant economic impact upon a substantial number of small entities. After emission guidelines are promulgated, states establish standards on existing sources, and it is those state requirements that could potentially impact small entities.

3. In the proposed standards for new power plants, EPA claims that the use of CCS "components" at ***non-power plant industrial facilities*** proves that full-scale integrated CCS systems are adequately demonstrated. However, in 2010, EPA co-drafted a report concluding that, "the integration of CO_2 capture, transportation, and permanent sequestration at commercial-scale, coal-fired power generating facilities ***has not yet been demonstrated.***"

   a. How can EPA say that the integration of CCS components has been adequately demonstrated when the research it cites says the opposite?

   b. Has EPA ever before proposed a standard which no single unit within the regulated category has previously met?

   c. Does EPA, in your view, have the authority to set standards without actual operating data? Can the agency set speculative standards?

The EPA has proposed to determine that CCS is technically feasible for new coal-fired power plants, because all of the major components of CCS – the capture, the transport, and the injection and storage – have been demonstrated and are currently in use at commercial scale. For example there are several industrial projects in the U.S. that are currently capturing the CO_2 for use in enhanced oil recovery (EOR) or other applications. There have been numerous smaller-scale projects that have demonstrated the technology, and there are several full-scale projects – both in the U.S. and internationally – that are under construction today. Thus, the EPA has proposed to determine that partial CCS is the Best System of Emission Reduction (BSER) for new coal-fired power plants.

In previous NSPS regulations, EPA has set limits based on analysis of technologies, their capability, and whether they could be transferred between similar processes. In those cases, operating units in the Clean Air Act category were not necessarily meeting the limits we proposed, but similar units in the United States or abroad were. In the 1990's, EPA

determined that Selective Catalytic Reduction (SCR) was the Best System of Emissions Reduction for industrial boilers and utility boilers. At that time, SCR had been used on some boilers in the United States and internationally. In the United States, SCR had been used on a small number of utility boilers but not on industrial boilers. Some of the regulated entities argued that SCR was not adequately demonstrated for industrial boilers, and therefore could not be the best system. The same parties also claimed SCR would be too expensive, even though the unit and technology configuration was practically identical between the two types of boilers. That is similar to what we are doing in the Carbon Pollution Standards, with an important difference. In our current rule, CCS has been, or is in the process of being used, on utility units at or beyond the level we have proposed.

4. In many instances the Clean Air Act (CAA) establishes cooperative federalism between States and EPA. This concept is included in Section 111 of the CAA:

   a. Is it your understanding that, for existing power plants, EPA would issue a "guideline" but States have the lead in setting case-by-case emission standards?

   b. How much compliance time is EPA planning on allowing the states?

   c. A number of stakeholders have made clear that while EPA issues a "guideline," the Clean Air Act authorizes States to make case-by-case determinations as to NSPS limits for existing plants. And that, if certain appropriate criteria are met, an individual plant might be assigned a longer compliance period or less stringent standard. Going forward, is EPA committed to honoring this cooperative federalism structure?

   d. Will EPA adopt a program that will force new retirements of coal units, especially those that have invested in installing new pollution controls to comply with previous EPA rules?

Section 111(d) is a state-based program for existing sources. The EPA establishes guidelines. The states then design programs that fit in those guidelines and get the needed reductions. We issued the proposed Clean Power Plan on June 2, 2014, and it was published in the Federal Register on June 18, 2014. The Clean Power Plan has two main parts: state-specific goals to lower carbon pollution from power plants and guidelines to help the states develop their plans for meeting the goals. The goal is a target states have to meet by 2030, while starting to make meaningful progress toward reductions by 2020. States develop plans to meet their goals, but EPA is not prescribing a specific set of measures for states to put in their plans. This gives states flexibility. States will choose what measures, actions, and requirements to include in their plans, and demonstrate how these will result in the needed reductions.

The Clean Power Plan will put in place a consistent national framework that builds on work states are already doing to reduce carbon pollution – especially through programs that encourage renewable energy or energy efficiency. It will reduce carbon pollution from existing power plants while ensuring a reliable and affordable supply of power.

States will have fifteen years from when the rule is final until compliance with the final target, time in which to plan for and achieve reductions in carbon pollution.

5. In 2010, EPA proposed ozone National Ambient Air Quality Standards (NAAQS) which could have tripled the number of counties that would become non-attainment for ground level ozone. In fact, many of America's most pristine national parks would have failed those standards:

   a. Has EPA given serious thought to the potential impacts of a new, lower standard on rural areas in the intermountain west? How would these sparsely populated areas be able to comply with lowered standards?

   b. How is EPA planning on addressing the unique regional meteorology of varied parts of the country with a national standard? The topography and meteorology in the intermountain west is much different from the I-95 corridor – how can one national standard thoroughly address these differences?

   EPA has not yet reached a final decision about what revisions to the ozone standards are appropriate in light of the current scientific evidence. EPA intends to issue a proposed decision addressing the question of whether it is appropriate to revise the current primary and secondary ozone NAAQS by December 1, 2014 (as required by court order), and the public will have a chance to review and comment on the proposal before EPA issues a final rule.

6. What are EPA's intentions with respect to a new transport pollution rule?

   a. Will EPA ensure that states and utilities are given adequate time to comply with the rule?

   Following the Supreme Court's decision to uphold the agency's approach in the Cross-State Air Pollution Rule (CSAPR) to improving air quality in downwind states, the case was remanded back to the D.C. Circuit for remaining litigation. The EPA asked the D.C. Circuit to lift the stay of the rule that was issued in December 2011 and to adjust the deadlines in the rule so that CSAPR phase 1 would begin on January 1, 2015. Lifting the stay now and implementing CSAPR at the beginning of next year would ensure that the important public health benefits for 240 million Americans are not further delayed. On October 23, 2014, the court granted EPA's motion to lift the stay. EPA is currently reviewing the court's order to determine whether any further guidance or administrative action is necessary to begin implementation of CSAPR. EPA will await resolution of the remaining litigation in the D.C. Circuit before resolving questions related to how regulated entities may demonstrate compliance with multiple requirements simultaneously.

7. EPA had determined that electric generating units in the East that were subject to the Clean Air Interstate Rule (CAIR) program did not have to comply with regional haze best available retrofit technology (BART) requirements because CAIR would reduce emissions more than BART. When EPA replaced CAIR with the Cross-State Air Pollution Rule (CSAPR), it revoked the determination that compliance with CAIR constituted compliance with BART, and instead determined that compliance with CSAPR constituted compliance with BART. Since CSAPR was overturned by the D.C. Circuit in 2012:

   a. Does EPA plan to return to its determination that compliance with CAIR constitutes compliance with BART?

b. If not, does EPA intend to subject electric generating stations in the East to regional haze BART requirements on a source by source basis?

c. When does EPA expect to decide?

Following the Supreme Court's decision to uphold the agency's approach in the Cross-State Air Pollution Rule (CSAPR) to improving air quality in downwind states, the case was remanded back to the D.C. Circuit for remaining litigation. The EPA asked the D.C. Circuit to lift the stay of the rule that was issued in December 2011 and to adjust the deadlines in the rule so that CSAPR phase 1 would begin on January 1, 2015. Lifting the stay now and implementing CSAPR at the beginning of next year would ensure that the important public health benefits for 240 million Americans are not further delayed. On October 23, 2014, the court granted EPA's motion to lift the stay. EPA is currently reviewing the court's order to determine whether any further guidance or administrative action is necessary to begin implementation of CSAPR. EPA will await resolution of the remaining litigation in the D.C. Circuit before resolving questions related to how regulated entities may demonstrate compliance with multiple requirements simultaneously.

8. EPA has been collecting Renewable Fuel Standard (RFS) Renewable Identification Number (RIN) price information on every trade in the last three years. In fact, they can only be traded on EPA's electronic exchange. Has EPA released RFS RIN price information to the public in any form?

The EPA tracks the tens of thousands of RIN transactions (generation, buy/sell, and retirement) that occur each day using the EPA Moderated Transaction System (EMTS). It is important to note that EMTS is not a trading platform but strictly a RIN tracking tool designed to facilitate reporting under the Renewable Fuel Standard program. The transactional information reported to EMTS by RIN generators, RIN buyers and sellers, and obligated parties is typically claimed as confidential business information (CBI). Material claimed as CBI may not be made available to the public until a final confidentiality determination has been made pursuant to the EPA's CBI regulations under 40 CFR Part 2, Subpart B, and after that, only if a determination is made that the material is not entitled to be claimed as CBI. In the absence of a final determination, the EPA treats the information as confidential unless otherwise permitted by the EPA's CBI regulations. There is a considerable amount of aggregated, publicly available information related to renewable fuel RIN data on the EPA website at http://www.epa.gov/otaq/fuels/rfsdata/index.htm. We are exploring ways to increase the amount of data related to RINs, including price, that we publish on our website.

9. EPA is required by the Energy Independence and Security Act of 2007 to promulgate annual Renewable Fuel Standard (RFS) volumes by November 30 of the previous year. For the 2013 volumes, you were nine months late, but those standards were retroactive to the beginning of 2013. You also missed this deadline for 2014 and have not yet promulgated volumes for 2014. What steps have you taken to get back on the statutory schedule for the annual rulemaking on RFS volumes?

The annual RFS rulemaking process and schedule have proven to be challenging. The RFS touches a range of complex environmental, energy, and agricultural issues, and the need for interagency review and public comment adds to the timelines for issuing annual standards. The EPA is currently considering how to improve our internal regulatory review processes

in order to meet established deadlines. The EPA will be engaging our interagency partners, including OMB, during the course of this process to identify any areas that could be streamlined in the interagency review process for a more efficient and timely review in the future.

10. What are some of the key assumptions underlying your 2014 proposed RVO? What was the basis of those assumptions?

    Our 2014 RFS proposal contains an in-depth analysis of the factors that impact the market's ability to achieve the volumes Congress established in the 2007 Energy Independence and Security Act (EISA). The proposal intends to address two important constraints: limitations on the volume of ethanol that can be consumed in gasoline given practical constraints on the supply of higher ethanol blend to the vehicles that can use them and other limits on ethanol blend levels in gasoline; and limitations in the ability of the industry to produce sufficient volumes of qualifying renewable fuel. More details on our analysis can be found in the rulemaking docket at EPA–HQ–OAR–2013–0479.

11. What is the timeframe for finalizing the RIN quality assurance program rule? Are you aware of any other ongoing investigations into RIN fraud?

    On July 2, 2014, the EPA issued a final rule establishing a voluntary quality assurance program for verifying the validity of RINs under the RFS program, after considering extensive public comments and conducting further outreach to industry stakeholders. The Agency does not comment or provide information on potential ongoing investigations.

12. According to the regulatory impact analysis of your recent Tier 3 sulfur rule, the regulation will require refineries to install equipment that would increase energy consumption and thus increase greenhouse gas emissions from refineries. EPA has also indicated it will pursue a refining GHG NSPS next year and plans to continue using its Title V permitting authority to reduce GHGs. How will EPA take into account its own regulation that increase GHGs when placing new burdens on the companies that make gasoline and diesel?

    The EPA is not currently developing national standards to specifically regulate greenhouse gas (GHG) emissions from petroleum refineries. Were the EPA to propose a New Source Performance Standard that would limit GHG emissions from refineries, the proposal would reflect the best available science and data, including information about all applicable regulations, to determine what standard represents the Best System of Emissions Reduction as defined by the Clean Air Act. With respect to refineries, the EPA is continuing to study the issue and, to the extent it moves forward with developing such rules, the EPA would reach out to and engage all interested stakeholders.

13. According to your regulatory impact analysis of the RFS, the law will increase ozone levels in many counties- including those that are already out of attainment. Will your forthcoming standards take into account other federal policies that are forcing increases in ozone levels?

    The EPA sets the National Ambient Air Quality Standards at a level that is requisite to protect the public health and welfare, based on the best available science. The U.S. Supreme Court ruled in Whitman v. American Trucking Associations, 531 U.S. 457 (2001), that the EPA may not consider the costs of implementation in setting standards as provided in section 109(b) of the Clean Air Act. However, when implementing the standard, the

Clean Air Act gives state and local officials in nonattainment areas the ability to consider several factors, including other policies already in place, employment impacts, and costs of controls, when designing their state implementation plans.

14. Did EPA estimate how many parts per billion of ozone will be reduced by the Tier 3 mobile source rule?

We conducted a thorough and state-of-the-science photochemical air quality analysis of the impact of the Tier 3 mobile source rule on emissions and air quality, relative to a baseline scenario without the rule in place. We estimate that Tier 3 will reduce ozone concentrations on average by 0.49 ppb in 2018 and 0.98 ppb in 2030 on a population-weighted basis. We expect that in both 2018 and 2030, the majority of counties will experience decreases in ozone concentrations of between 0.5 and 1 ppb due to the Tier 3 standards, with over 265 counties having projected decreases of over 1.0 ppb in 2030. More information on the air quality improvements expected from the Tier 3 rule can be found on pages 23446 and 23447 of the Tier 3 preamble (79 FR 23414, April 28, 2014) and pages 7-75 through 7-132 of the Regulatory Impact Analysis.

15. Has EPA estimated how much lower the global level of carbon dioxide will be if the proposed NSPS 111(b) new source and 111(d) existing source rules are finalized? If not, why not?

The EPA estimated that the proposed Clean Power Plan will result in CO2 emission reductions of 371-383 million metric tons in 2020 and 545-555 million metric tons in 2030. These emission reductions will contribute toward reductions in global atmospheric concentrations of CO2.

16. Will EPA include and consider an assessment of the financial stability of the companies it relies upon when setting cellulosic production mandates?

The statute requires that the EPA project cellulosic biofuel production on an annual basis, and if that projected level is lower than the applicable volume set forth in the statue, the EPA is to reduce the applicable cellulosic biofuel volume used to the annual cellulosic biofuel standard to that lower projected level. In establishing our projection of cellulosic biofuel that will be produced, we take current and expected state of funding for each production source into account. A detailed explanation of this process is included in the 2014 proposed rulemaking.

17. Recent press reports cite that the cost to refiners for RIN credits to comply with the RFS in 2013 exceeded $1.35 billion dollars. Will EPA keep the 2014 ethanol mandate below 9.7% to avoid these significant, artificial costs to the economy and the public?

Since the 2014 RFS volume proposal was released, we have met with multiple stakeholders to listen to their input on the proposed rule and to solicit any new and relevant data that should be factored into setting the volume standards for 2014. These stakeholders include representatives from the biofuel sector, the agricultural sector, petroleum refiners, environmental groups, and various other organizations and sectors. The EPA also received over 300,000 comments on the 2014 RFS proposal, and a number of these comments raise issues related to RIN prices and the potential costs of the program. The EPA evaluated all

comments on the proposal from the various stakeholders and has considered them in preparing the draft final rule currently under interagency review.

18. EPA is now on its second attempt proposing GHG NSPS– the Agency withdrew the first version over concerns it could not sustain legal challenges. Yet, EPA re-proposed the GHG NSPS ignorant that its reasoning violated the Energy Policy Act of 2005's express prohibition against considering federally subsidized clean coal projects as adequately demonstrated technology. Nearly 5 months after signing the new proposal, the Agency released an after-the-fact, attempt at explaining this violation of congressional intent. Is it prudent for the Agency to finalize the proposal that violates or appears to violate congressional intent? How does the provide certainty to those the Agency seeks to regulate?

    Any final rule the EPA issues based on this proposal will be based on sound science and will comply with all applicable laws and regulations. The EPA does not believe that the Energy Policy Act of 2005 provisions precludes consideration of the projects EPA has evaluated. The EPA has issued a Notice of Data Availability (NODA) that notes the availability of a Technical Support Document (TSD) in the rulemaking docket that details its proposed position on this issue. It explains, "EPA interprets these provisions to preclude EPA from relying solely on the experience of facilities that received EPAct05 assistance, but not to preclude EPA from relying on the experience of such facilities in conjunction with other information." EPA based its proposed determination on a number of projects and other information including projects that did not receive any assistance under EPAct05. In addition, the agency extended the public comment period for January 2014 proposal by 60 days to allow adequate time for the public to review and comment on the contents of the NODA and TSD.

19. EPA has recently issued new more stringent NAAQS without at the same time providing States and business critical implementation and permitting information. Will you commit to EPA issuing updated implementation tools and policies at the time a new NAAQS is issued, so that businesses have a reasonable opportunity to secure the permits needed to build or expand facilities?

    The national ambient air quality standard is a health-based standard which the Clean Air Act directs EPA to set at a level requisite to protect public health and public welfare. That said, it is important that States, regulated parties, and the general public have the information they need to achieve and maintain these health-based standards. EPA has worked and will continue to work to provide the best tools and information feasible in as timely a way as possible.

20. EPA estimates that the 2010 ozone NAAQS reconsideration would have cost American manufacturing, agriculture and other sectors over $90 billion per year. In analyzing these regulations, does EPA consider the economic and environmental effects of driving manufacturing offshore to countries with little or no environmental controls?

    EPA is prohibited by law from considering costs of implementation in setting the NAAQS. The U.S. Supreme Court reiterated in Whitman v. American Trucking Associations, 531 U.S. 457 (2001), that the EPA may not consider the costs of implementation in setting standards that are requisite to protect public health and welfare, as provided in section

109(b) of the Clean Air Act. However, the Clean Air Act gives state and local officials in nonattainment areas the ability to consider several factors, including employment impacts and costs of controls, when designing their state implementation plans to implement the NAAQS.

EPA does provide estimates of costs and benefits in a separate docket. For the 2010 ozone NAAQS reconsideration, EPA provided cost estimates for each alternative standard considered. These benefit and cost estimates are illustrative values, because states will develop their own plans to meet the NAAQS.

21. In 2010, EPA co-drafted a report concluding that "until [CCS] systems are constructed and successfully demonstrated at full scale, uncertainty over the technology's performance and cost yield a substantial risk premium for early projects." How can EPA now say that technology with a "substantial risk premium" is adequately demonstrated?

The EPA has proposed to determine that CCS is technically feasible for new coal-fired power plants, because all of the major components of CCS – the capture, the transport, and the injection and storage – have been demonstrated and are currently in use at commercial scale. For example there are several industrial projects in the U.S. that are currently capturing the CO2 for use in enhanced oil recovery (EOR) or other applications. There have been numerous smaller-scale projects that have demonstrated the technology, and there are several full-scale projects – both in the U.S. and internationally – that are under construction today. Thus, the EPA has proposed to determine that partial CCS is the Best System of Emission Reduction (BSER) for new coal-fired power plants.

22. EPA cites three studies in the "literature" section of the GHG NSPS's "technical feasibility" discussion of CCS. Yet, EPA leaves out that one of those studies concludes that "there is truth to the often heard assertion that CCS has never been demonstrated at the scale of a large commercial power plant," another assumes carbon capture is "unproven technology" and the other – which EPA co-drafted – says that carbon capture has "not been demonstrated at a scale necessary to establish confidence for power plant application." Does EPA accurately portray the science on CCS when it selectively characterizes studies in this manner?

EPA's proposed standards rely on a wide range of data, information and experience well beyond that generated by particular projects or studies. The EPA has proposed to determine that CCS is technically feasible for new coal-fired power plants because all of the major components of CCS – the capture, the transport, and the injection and storage – have been demonstrated and are currently in use at commercial scale. For example there are several industrial projects in the U.S. that are currently capturing the CO2 for use in enhanced oil recovery (EOR) or other applications. There have been numerous smaller-scale projects that have demonstrated the technology, and there are several full-scale projects – both in the U.S. and internationally – that are under construction today. Thus, the EPA has proposed to determine that partial CCS is the Best System of Emission Reduction (BSER) for new coal-fired power plants.

23. The Clean Air Act says EPA is supposed to set new source performance standards by looking at technology actually in use and determining what technology has been "adequately demonstrated" taking into account cost. But in the GHG NSPS, EPA conducts this analysis by looking at DOE

modeling. Does it make sense that EPA analyzed the current state of CCS technology through hypothetical modeling results?

In addition to information from the Department of Energy, the EPA based its proposal that partial CCS is the Best System of Emission Reduction (BSER) for new coal-fired power plants on actual projects and the state of the technology as noted above.

24. It is our understanding that there are 78 sole source aquifers in the United States, some of which are located under major cities, such as Baton Rouge, LA, San Antonio, TX, Austin, TX, Miami, FL, and Sante Fe, NM, among others. Under the Safe Drinking Water Act, EPA is authorized to address possible contamination of sole source aquifers from the disposal of storm water or waste water treatment facilities. Has the Office of Air and Radiation sought an opinion from the Office of Water about the long-term sequestration of CO_2 in proximity to a sole source aquifer since pipelines would have to either pass through or underneath such an aquifer? If it has failed to do so, please explain.

    a. Isn't this issue relevant to EPA's determination that CCS is the best system of emissions reduction adequately demonstrated to reduce CO_2 emissions from fossil fuel-fired power plants?

EPA's Office of Air and Radiation and Office of Water have worked closely for a number of years to develop a regulatory framework that ensures long-term safe geologic sequestration. EPA's Underground Injection Control (UIC) Program, established under the Safe Drinking Water Act, sets requirements to ensure that geologic sequestration is conducted in a way that that geologic sequestration wells are appropriately sited, constructed, tested, monitored, and closed in a manner that safeguards protection of underground sources of drinking water. The location of a sole source aquifer would be a potential consideration for UIC permitting. The proposal does not change any of the requirements to obtain or comply with a UIC permit for facilities that are subject to EPA's UIC program under the Safe Drinking Water Act.

25. The technical support documents and other materials accompanying the proposed NSPS for new fossil fuel-fired power plants do not show any research on cross-media issues by EPA's Office of Water or Office of Solid Waste that address the injection and long-term sequestration of CO_2 underground. Nor do they show any research on potential contaminants that might travel with the CO_2 separated from power plants. The technical support documents and other materials do point to the Class VI and Class II programs for oil and gas injection wells. Please explain how either of these programs could apply to new coal fired power plants sequestering CO_2 that would be built outside of states with oil and gas recovery areas?

    a. Is EPA presuming that all CO_2 emissions would be sent via pipeline to oil and gas recovery areas? Has the agency conducted an analysis that the oil and gas industry could use all of this CO_2? Has the agency conducted an analysis of the amount of specialty pipelines that would need to be constructed to move all the CO_2 from non-oil and gas recovery areas to oil and gas recovery areas?

The Safe Drinking Water Act requires EPA to develop minimum federal requirements for UIC programs and other safeguards to protect public health by preventing injection wells

from contaminating underground sources of drinking water (USDWs). States implement UIC programs that have been delegated to the states; otherwise, the requirements are implemented by the EPA. Carbon dioxide has been transported via pipelines in the United States for nearly 40 years. The transportation component of CCS is well-established as technically feasible. Approximately 50 million metric tons of CO2 are transported each year through 3,600 miles of pipelines, and several hundred miles of dedicated CO2 pipeline is under construction, planned, or proposed. The proposal does not change any of the requirements to obtain or comply with a UIC permit or for pipeline safety under the relevant statutes and regulations, including Department of Transportation pipeline safety regulations.

26. Please explain how EPA asserts that both the separation and sequestration of CO_2 processes are commercially demonstrated based on the four projects the proposed NSPS cites when none of those plants are operational? In fact, isn't it the case that three of the four projects have not even been constructed yet and the fourth project at the Kemper Plant in Mississippi has not injected any CO_2 into the ground?

The EPA has proposed to determine that CCS is technically feasible for new coal-fired power plants, because all of the major components of CCS – the capture, the transport, and the injection and storage – have been demonstrated and are currently in use at commercial scale. As identified in the Notice of Data Availability, the EPA looked at all available science and data, including numerous projects. For example there are several industrial projects in the U.S. that are currently capturing the CO2 for use in enhanced oil recovery (EOR) or other applications. There have been numerous smaller-scale projects that have demonstrated the technology, and there are several full-scale projects – both in the U.S. and internationally – that are under construction today. Thus, the EPA has proposed to determine that partial CCS is the Best System of Emission Reduction (BSER) for new coal-fired power plants.

27. The proposed NSPS for new fossil fuel-fired power plants asserts there will be a negligible increase in the cost for electricity as a result of the proposal because: (1) most new power plants that will be constructed will be fueled by natural gas due to low gas prices and (2) CCS costs will fall over time as the technology becomes more widely used. However, in the time since the proposed rule was published in the Federal Register, natural gas prices have gone from $4.00 mcf to $6 mcf. In the PJM RTO market, gas prices increased to $40, which resulted in wholesale electricity prices of $761 per MWh. MISO experienced increases as well that translated to wholesale prices of $219 per MWh. Please explain how EPA concludes that the levelized costs of electricity will be marginally affected by the proposed NSPS given the volatility of natural gas price historically and the widely expected increase in use of natural gas for electricity generation?

The proposed carbon pollution standards for new power plants reflect an ongoing trend in the power sector—a shift toward cleaner power plants that take advantage of modern technologies that will become the next generation of power plants. These standards are in line with current industry investment patterns. Expected and anticipated economic conditions will lead electricity generators to choose fuels and technologies that are designed to meet the proposed standard without the need for additional capture or control, even in the absence of the rule. As a result, this rule is expected to have no, or negligible, impact on levelized costs.

EPA's levelized costs are annual projected costs, not short-term spot prices. The high prices experienced in PJM last winter were the result of very short-term scarcity from anomalous weather events, and are not expected to have longer-term impacts on annual average natural gas prices that are the basis for EPA's levelized costs. Moreover, there is an active spot market in natural gas that permits buyers to hedge against fluctuating prices. Short-term price volatility in natural gas is entirely consistent with EPA's analysis.

28. During the January 21, 2014, EPA Science Advisory Board conference call, several representatives from electric utilities spoke about how CCS would not be feasible in their states for a variety of reasons. A speaker from a NY utility discussed how while there was sufficient local cap rock to hold CO_2 underground, New York state law precludes the injection of CO_2 into the ground because such gas would stretch beyond the subsurface owned by the utility. Any leakage of the gas into the subsurface of another property owner would constitute a legal trespass. Thus, the utility would be precluded from using CCS technology at coal-fired power plant.

    a. Has EPA considered how state laws might preclude the use of CCS technology? Can you provide the committee of an example of where EPA has mandated the use of a technology that would be barred by state law?

In the proposed carbon pollution standards for new power plants, the EPA has not mandated the use of CCS. Rather, the Agency has proposed emission standards that must be met by new electric generating units. If state law prohibits the use of CCS, then a new NGCC plant can be built to serve the electricity demand that the coal-fired plant would otherwise serve. Thus, the proposed rule would not prevent basic electricity demand from being met.

A new source developer would also have the option of transporting the captured CO2, via pipeline, to an area that is suitable for long term storage. Carbon dioxide has been transported via pipelines in the U.S. for nearly 40 years. Approximately 50 million metric tons of CO2 are transported each year through 3,600 miles of pipelines. Moreover, a review of the 500 largest CO2 point sources in the U.S. shows that 95 percent are within 50 miles of a possible geologic sequestration site.

29. During the January 21, 2014, EPA Science Advisory Board conference call, a representative of a Michigan utility discussed how the utility wanted to build a new coal-fired power plant using CCS technology. No vendors would provide the utility with a price warranty or guarantees on performance of the CO_2 injection because of the novelty of the technology. As a result, the utility decided to instead build a new natural gas-fired power plant that would meet both the 2012 and 2014 proposed New Source Performance Standard for natural gas combined cycle (NGCC) plants. The state of Michigan then asked the utility to provide an explanation why the new NGCC plant would not use CCS.

    a. While the proposed NSPS asks for comments on natural gas plants and CCS, it does state that EPA does not have enough information to make a decision about requiring CCS technology on NGCC plants. Can you please explain to the committee why the state of Michigan would require a utility to conduct a CCS feasibility study on a proposed NGCC plant that would

emit 970 lb CO_2/MWh? Is the EPA region 5 Office telling state air regulators to require permitees to conduct such studies on all fossil fuel fired power plants? Does EPA find it troubling that no vendors will provide guarantees of performance on CCS technology?

I cannot speak on behalf of the State of Michigan or to the specifics of the permitting process in this case. However, the Prevention of Significant Deterioration (PSD) provisions of the Clean Air Act (CAA) require that a new major source of air pollution, such as a fossil fuel fired power plant, must obtain a permit before it can begin construction. The PSD program requires such a facility to install "best available control technology" or BACT for all pollutants emitted above a threshold level. The BACT requirement, must be based on "the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted for or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant" according to the CAA [42 U.S.C. § 7479 (3)]. The CAA goes on to specify that BACT may not be less stringent than an applicable New Source Performance Standard (NSPS).

Michigan has a State Implementation Plan (SIP) that includes an approved Prevention of Significant Deterioration (PSD) permitting program, which means the State of Michigan evaluates BACT and issues PSD permits for sources in Michigan. The EPA has recommended a process for making a BACT determination based on a case-by-case assessment of each facility. This process, known as "top-down" BACT, is not required of states, but Michigan uses it, based on the guidance they provide on their website (http://www.deq.state.mi.us/aps/downloads/permits/PSD%20Workbook.pdf). A top-down BACT analysis requires that all available control technologies are assessed in the first steps, but some control options may then be excluded at later steps, based on technical feasibility, cost or other factors. The first BACT step, a consideration of available technologies, is meant to be broad and considers all technologies that are potentially applicable to the type of source under evaluation – including those technologies that have only been demonstrated on other types of sources. However, later steps require an evaluation of the technical feasibility of control technology at the specific source in question, which includes site-specific considerations. The technically feasible technologies are then ranked by effectiveness, and ultimately BACT is selected based on a consideration of many factors. This evaluation process ensures that each BACT analysis results in the most environmentally-protective, economically feasible, state-of-the-art technology for each new large emissions source, as we believe the CAA requires. While EPA is not the PSD permitting authority for sources in Michigan, EPA may submit comments on the Michigan's draft permits to ensure that the BACT decisions are supported by the record.

CCS was operated on an NGCC facility now owned by NextEra Energy, Inc. in Bellingham, MA for many years and it has been operated at other combustion sources. Therefore, any BACT analysis for an NGCC facility would include CCS in at least the first step of a top-down BACT analysis. However, we note that, as of yet, no permitting authority, including the EPA, has determined CCS as BACT for an NGCC facility. The reasons for rejecting

CCS in these cases have been generally based on technical or economic concerns of the technology for the source in question.

As for the availability of vendor guarantees for CCS, we note that vendors are currently working closely with developers of CCS projects. While EPA does not have details of the actual contracts, there are four separate vendors supporting the Boundary Dam, Kemper, TCEP and HECA projects who have committed to building power plants that are designed to meet rates below the proposed standard.

30. The In Salah CO_2 sequestration project in Algeria was stopped in November 2012 when BP discovered that the CO_2 moved within the rock formation several years after injection began. The In Salah project raises questions about the adequacy of the seal of caprock. While no CO_2 was released into the atmosphere and no one was harmed by the cracking of the rock, the project demonstrates that sequestration is still extremely experimental, even after seven years of operation. There are a host of unanswered questions related to the long-term sequestration of CO_2, including subsurface water contamination, migration of CO_2 underground, potential Superfund liability, the impact of sequestration on navigable waters, and impact of sequestration on endangered species.

    a. Can you please provide the committee with a detailed explanation of the peer review science examining these issues?

Industry, researchers, government agencies, and other stakeholders have been evaluating geologic sequestration for a number of years. The Intergovernmental Panel on Climate Change Special Report on CCS concluded that with appropriate site selection, a monitoring program, a regulatory system, and the appropriate use of remediation methods, the local health, safety and environmental risks of geologic sequestration would be comparable to risks of current activities. As part of that report and in the years that followed, peer reviewed literature on geologic sequestration has continued to grow. The EPA has and will continue to monitor and review this literature.

31. In moving to dismiss the State of Nebraska challenge to EPA's violation of the Energy Policy Act of 2005, EPA represented to the District Court on March 18, 2014 that the publication of the NSPS proposal has no legal consequences and determines no rights or obligations. Are agencies conducting PSD and NSR permitting under no obligation to consider findings in NSPS proposals?

EPA addressed this issue in the preamble to the proposed new source standard. As stated there, the only legally binding requirement is found in section 169 (3) of the Act (definition of Best Available Control Technology) which indicates that "[i]n no event shall application of [best available control technology] result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section 111 or 112 of the Act." This requirement only comes into effect "upon completion of an NSPS"; thus, "[i]t is important to note that a proposed NSPS does not establish the BACT floor for affected facilities seeking a PSD permit." 79 FR at 1489 (Jan. 8, 2014).

EPA explained further that "[i]n cases where a NSPS is proposed, the NSPS will not be controlling for BACT purposes since it is not a final action and the proposed standard may

change". *Id.* The agency added that "the record of the proposed standard (including any significant public comments on EPAs evaluation) should be weighed when considering available control strategies and achievable emission levels for BACT determinations made that are completed before a final standard is set by EPA." *Id.* This type of consideration does not alter permit writers' existing obligations. Permit writers are required by statute to consider all of the statutory factors, including "methods, systems, and techniques... for control of each ... pollutant" in making case-by-case, individualized determinations of what constitutes best available control technology. Thus, at present, permit writers have to address the potential application of carbon capture and sequestration when making best available control technology for carbon pollution and would necessarily do so whether or not EPA had issued its proposed NSPS.

32. On November 12, 2013, the SAB Work Group recommended that SAB provide EPA advice and comments on the scientific and technical basis for long term carbon storage. EPA pressured SAB not to do so, and in response on January 29, 2014 SAB decided not to provide advice and comments in deference to "EPA's legal view, communicated to the SAB from EPA's Office of Air and Radiation, that the portion of the rulemaking addressing coal-fired power plants focuses on carbon capture and that the regulatory mechanisms for addressing potential risks associated with carbon sequestration are not within the scope of the Clean Air Act." Provide documentation of all EPA contact with SAB and all documents discussing the recommendation to SAB from November 12 to January 29. When did EPA formulate this view? Provide any documents that show EPA formulated and held this view prior to the Work Group sending EPA questions on September 6, 2013.

While the EPA has confidence that geologic sequestration is technically feasible and available, we recognize the need to continue to advance the understanding of various aspects of the technology. We have engaged with the SAB on key issues relating to sequestration and look forward to continuing to collaborate with the SAB on this important topic to ensure that our work is based upon the best available science.

The proposed Carbon Pollution Standards rely on the existing EPA requirements that are already in place for monitoring and permitting CO2 injection and geologic sequestration. Under the proposed Carbon Pollution Standards, if a new power plant decides to use CCS to comply with the standard, captured CO2 must be sent to a facility that meets the existing regulatory requirements for monitoring and reporting geologic sequestration. The EPA has an existing permitting framework in place under the Safe Drinking Water Act governing these kinds of projects and has been working closely with states and some facilities in the permitting process. Pilot projects have been permitted under the existing regulatory framework, providing valuable experience and technical information to the EPA and states.

To be recognized as conducting geologic sequestration under the existing requirements (Subpart RR of the Greenhouse Gas Reporting Program), all facilities, including EOR, must conduct monitoring and reporting to show that the CO2 remains underground. For CO2 that is not recognized as being sequestered, EOR facilities can continue to report under the requirements for CO2 injection (Subpart UU of the Greenhouse Gas Reporting Program). The EPA believes that it is appropriate to rely on these same, existing requirements for the proposed new source rule, and will closely evaluate comments that we receive on this issue.

After consideration of the clarifying information and thorough discussion about the issues during several meetings of the SAB that were open to the public, the workgroup recommended to the full SAB that additional review of the science of sequestration was not necessary in the proposed Carbon Pollution Standard. The full SAB agreed with the workgroup's assessment that the EPA did not propose to set any new requirements for sequestration in the Carbon Pollution Standards and that peer review of the DOE cost studies was sufficient. In a memo dated January 29, 2014, the SAB informed the EPA that it will not undertake further review of the science supporting this action.

33. The SAB Work Group found the NSPS proposal is based on two studies by the Department of Energy National Energy Technology Laboratory that were not subject to adequate peer review. EPA had wrongly claimed to SAB that all NETL studies cited in the proposal were peer reviewed. What, if any, studies cited in the NSPS proposal did EPA determine meet EPA's standards for peer review prior to posting the proposal online? Provide all documentation that supported any such determinations.

The SAB's transparent, deliberative process provided an opportunity for us to provide some additional information on the basis of the DOE NETL cost studies that the EPA used in developing the proposed rule and the peer review process followed by DOE NETL for that study. The DOE's robust process included outside input from knowledgeable stakeholders including industry, academia and government experts in the design of the study and a peer review of the final report by a wide range of similar experts. While the EPA did not conduct additional peer review of these studies, the different levels of multi-stakeholder technical input and final review meet the requirements to support the analyses as defined by the EPA Peer Review Handbook.

34. Comments on the draft of the proposed NSPS submitted to OMB noted that the draft did not discuss the feasibility of long term CO2 storage. In response, EPA "added additional language to the preamble regarding sequestration of CO_2." Exactly what language did EPA add in response to these comments? When did EPA draft this language? What personnel where involved? What research supporting the language was conducted?

EPA staff across a number of offices developed the preamble language for the proposal. The additional text was added during the EO 12866 review process and changes are noted in the docket to the proposal.

35. The NSPS proposal discusses a study that models geologic sequestration published in the American Journal of Science. EPA states that the study "estimated that about 93 million metric tons of CO_2 were injected and about 38 million metric tons were produced from 1972 to 2005" at the SACROC Unit in western Texas "resulting in a geologic CO_2 accumulation of 55 million metric tons of CO_2." The use of this statistic and the unusual way the study is cited in the NSPS proposal suggest that those responsible for this discussion did not obtain or read the study and instead reviewed only the online abstract. The abstract included the statistic merely as a back of the envelope estimate of total CO_2 injected. Provide evidence that the EPA personnel responsible for this language obtained and reviewed the study, not just the online abstract.

EPA staff reviewed the relevant literature on geologic sequestration, including the article cited in the preamble.

36. The Clean Air Act relates the effective date of national new source emission standards back to the date of proposal in the Federal Register. The Clean Air Act also requires such standards be finalized in one year in order to prevent abuse of the relation back to the date of proposal. Provide all documents discussing the relation back of the effective date for national new source standards in relation to greenhouse gases. Provide all documents discussing the immediate effects of proposing national new source standards on construction of new sources.

The publically available rulemaking docket for the proposed New Source Performance Standards can be found by searching for Docket ID: EPA-HQ-OAR-2013-0495 at the www.regulations.gov website.

The docket includes a Technical Support Document entitled "Fossil Fuel-fired Boiler and IGCC EGU Projects Under Development: Status and Approach," which has a docket ID of EPA-HQ-OAR-2013-0495-0024.

37. How do you plan to adhere to the objectivity requirements of the Data Quality Act in the face of increasing politicization of the climate change scientific debate?

I recognize that EPA has obligations under the Data Quality Act (DQA). For air rules, including those that have climate impacts, I will ensure the agency complies with the DQA's requirements.

38. Are you concerned about the disproportionate impact that new EPA electric utility standards will have upon the U.S. coal industry and its workers?

EPA is concerned about persistent challenges in U.S. job markets, and we evaluate potential employment effects of our proposed programs, including quantitative employment change estimates where we have scientifically valid data and modeling tools. Americans and American industry have shown throughout the history of our environmental programs that we can work together and innovate to reduce pollution, create jobs and achieve economic growth at the same time. EPA remains committed to working with our partners and stakeholders to find pragmatic approaches that achieve our health and environmental protection goals while reducing cost and maintaining a strong and thriving economy.

39. If employment evaluations reveal that EPA's new electric utility standards are likely to result in major job losses in the U.S. coal industry, how should that be taken into account by EPA in the administration and enforcement of the Clean Air Act?

EPA remains committed to working with our partners and stakeholders to find pragmatic approaches that achieve our health and environmental protection goals while reducing cost and maintaining a strong and thriving economy.

40. In March 2012, the U.S. Environmental Protection Agency (EPA) announced that they would formally revise the rule establishing criteria and procedures for use in determining if air quality monitoring data has been influenced by exceptional events. EPA indicated the intent to notice a proposed exceptional events rule in late 2013 or early 2014, which would then be followed by a formal public comment period. A final rule was expected to be published by late 2014 or early 2015.

a. Can you please provide an accurate and up-to-date timetable for the exceptional events rulemaking including when the agency anticipates noticing the proposed rule?

The EPA currently plans to propose rule revisions in mid-2015 and finalize these rule revisions in mid-2016. We want to take enough time both to consider seriously rule changes suggested by states and other stakeholders to help streamline the exceptional events demonstration process, and also to work with air agencies and other stakeholders on tools that air agencies can use to support these demonstrations. This revised schedule will get a rule in place prior to state implementation activities associated with potential future NAAQS revisions.

41. The prospect of a forthcoming rulemaking on exceptional events is encouraging. While EPA has issued a series of guidance documents aimed at offering clarity to the exceptional events process, the process by which states submit "exceptional event demonstrations" for review by EPA remains complicated, unpredictable, long, and expensive. The exceptional events rule ought to produce a consistent, commonsense, cost-effective, and timely process through which states are afforded an opportunity to exempt air quality standard exceedances caused by naturally occurring events outside of their control.

    a. Will the forthcoming exceptional events proposed rule streamline the process and reduce the regulatory burden on air quality planners at the state level?

    b. Will the proposed rule provide much needed consistency and predictability to a process that has been notorious for the lack of both?

    c. Does EPA require new legislative authority to provide air quality planners at the state level with a set of clear timelines associated with their exceptional events demonstration and a mechanism to appeal EPA's decisions with respect to them?

    While it is still too early to say with certainty what will be in the proposal we plan to issue in mid-2015, it is our intent to use our existing authority to propose a rule that would streamline the current exceptional events process, thereby reducing the burden on state environmental agencies. Such a rule would also clarify what EPA needs from states in evaluating exceptional event requests, thereby bringing more consistency and predictability to the process.

42. On February 7, 2014, EPA's Office of Atmospheric Programs, on behalf of the United States Global Change Research Program (USGCRP), published a federal register notice requesting public engagement in the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States. This report, part of the President's Climate Action Plan, and initiated by the Interagency Crosscutting Group on Climate Change and Human Health (CCHHG), is to be "an evidence-based, quantitative assessment of observed and projected climate change impacts on human health in the United States." It is our understanding that EPA will provide staff support, including where appropriate contractor support, coordinating functions, and regular updates. Further, EPA is drafting two chapters in the report on heat-related deaths and impacts from air pollution that is aggravated by climate change.

    a. Please describe in detail the staff support, including contractor support, to be provided or being provided to the development and drafting of this report. Please provide the names and titles of all individuals in OAR responsible for or contributing to EPA's role in the report.

b. Please detail the procedure by which the meetings of the group will be memorialized. Will there be formal transcription and meeting minutes made available to the public?

c. Please describe in detail the "air quality" review being performed by EPA for use in the report. Will this review include ozone and particulate matter and if so would these be qualitative and quantitative assessments for both? Please provide an explanation of the models being used as part of this review.

d. Please describe in detail the use of the study in new air quality standards, including those for GHGS, ozone and particulate matter.

e. Please describe in detail the definition and universe of "extreme temperature events" being catalogued and reviewed as part of the study.

f. Please describe in detail how uncertainty, including in climate impacts will be accounted for in the Chapters being developed by the Agency.

g. Please describe in detail how potential health benefits associated with potential increased temperatures will be examined. Please describe in detail how the potential health effects of reduced economic growth or employment as a result of prevention and mitigation strategies will be examined.

h. Please describe in detail the schedule for the development, including public comment, peer review, and issuance of final documents, of the report.

Staff members from across EPA routinely participate in interagency groups assessing the science of climate change and contribute to reports that characterize and communicate the impacts of climate change on the public health and welfare of current and future generations in the United States. The specific report you mention, the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States, is being developed under the auspices of the US Global Change Research Program (USGCRP), specifically the Interagency Crosscutting Group on Climate Change and Human Health (CCHHG). CCHHG membership includes approximately 13 agencies and is co-chaired by the Centers for Disease Control and Prevention (CDC), National Institute of Health (NIH), and National Oceanic and Atmospheric Administration (NOAA). EPA is helping coordinate the Special Report, as developing this report will leverage multiple activities of scientists across the federal government. EPA scientists from throughout the Agency are participating—including from the Office of Air and Radiation, the Office of Research and Development, and the Office of Water—with most chapters having contributing authors from several agencies.

The goal of the Special Report, outlined and shared with the public for input in the Federal Register notice referred to above, is to assess the state of the science regarding observed and projected health-related climate change impacts and associated changes in risk. In areas where quantitative analyses are available to evaluate potential changes in future health-related climate impacts and risks, the report will characterize uncertainty using qualitative confidence levels and, where possible, quantitative probabilistic likelihoods of specific impacts across a range of scenarios and possible outcomes. Projected health impacts, including for those attributable to air quality changes, will use well-established and scientifically peer-reviewed methods and models. The Special Report will follow USGCRP

guidelines for transparent reporting of likelihood, confidence, and uncertainty of the findings. The Special Report is focused on the impacts of climate change, and will not analyze or synthesize the impacts of mitigation or adaptation policies, nor will it include policy recommendations. The report will not make policy recommendations regarding changes in air quality standards. The information presented in the report will contribute to building the integrated knowledge base needed to understand, predict, and respond to health-relevant climate change impacts, and may help inform adaptation decisions and other public health strategies, including in the air quality arena.

A draft of the Special Report will undergo a technical peer review by the National Research Council of the National Academies. The draft Report will be made available for public comment in late spring of 2015 with final publication expected in late 2015. We expect the draft and final versions of this report, as is the case with most EPA or USGCRP reports of this nature, will list names of EPA and non-EPA individual authors, contributors, and reviewers.

43. The Natural Resources Defense Council (NRDC) issued a suggested framework for the EPA's upcoming 111(d) greenhouse gas proposal. NERA economic consulting performed an analysis of the NRDC proposal that projects annual compliance costs of $13-$17 billion per year and total consumer costs of $116 billion to $151 billion over the period 2018-2033. Please compare and contrast any similarities and differences between the NRDC proposal and the proposal sent to OMB for review.

The features of the proposed Clean Power Plan are explained in detail in the preamble to the proposed rule and other materials that the EPA has provided on its website. Notably, the proposed Clean Power Plan has public health and climate benefits worth an estimated $55 billion to $93 billion per year in 2030, with estimated costs of $7.3 billion to $8.8 billion. The benefits include avoiding 2,700 to 6,600 premature deaths and 140,000 to 150,000 asthma attacks in children. EPA remains committed to working with our partners and stakeholders to find pragmatic approaches that achieve our health and environmental protection goals while reducing cost and maintaining an affordable, reliable energy system and a strong and thriving economy.

44. Please explain in detail EPA's timetable for the "mid-term review" of its Phase II Light Duty Greenhouse Gas rules? Will this review include a sensitivity analysis examining a consumer's ability to afford ever-increasing fuel efficiency mandates and higher interest rates in the future? What agencies are or will be involved in the review? Please explain the Agency's plans for timely involvement of stakeholders during this process.

In the final rulemaking for the joint National Program for model year (MY) 2017-2025 light-duty greenhouse gas and fuel economy standards, the EPA and the National Highway Traffic Safety Administration (NHTSA) committed to a comprehensive midterm evaluation and agency decision making process for MY 2022-2025 standards, to be conducted in close coordination with the California Air Resources Board (CARB). The EPA's regulations (40 CFR 86.1818.12(h)) state that no later than November 15, 2017, the Administrator shall issue a draft Technical Assessment Report addressing issues relevant to the MY 2022-2025 standards. The Technical Assessment Report will be issued jointly with NHTSA and CARB, and will be available for public comment. The regulations also state that no later than April 1, 2018, the Administrator shall determine whether the standards for MY 2022-2025 are

appropriate under section 202(a) of the Clean Air Act, in light of the record then before the Administrator, and that EPA will provide an opportunity for public comment prior to making this determination.

The regulations list a number of factors that the EPA must consider in making this determination including: the costs on the producers or purchasers of new vehicles, the availability and effectiveness of technology, lead time for introducing new technologies, the feasibility and practicability of the standards, impacts on emissions, oil conservations, fuel savings by consumers, and automobile safety, and other factors.

The EPA already is engaged in stakeholder involvement, for example, with automakers, automotive suppliers, non-governmental organizations (NGOs), consumer organizations, researchers, and others, to receive input on issues relevant to the midterm evaluation, and will continue extensive stakeholder dialogue throughout the process.

45. Concern surrounds the upcoming Heavy Duty Truck Phase II Fuel Economy proposal and whether it will be engine-focused or whole truck-focused. Will the proposed standard involve both engine and whole truck mandates?

The EPA and NHTSA are jointly developing the proposal for the second round of heavy-duty GHG and fuel efficiency standards ("Phase 2"). In the first round, finalized in 2011 ("Phase 1"), the agencies established both engine and vehicle standards for certain vehicle categories. For Phase 2 the agencies are considering the Phase 1 approach of both engine and vehicle standards as well as other approaches, but no decisions have yet been made.

46. It appears that zero emission vehicle (ZEV) sales are not going to meet California's 2025 goal of 15.4% of total sales. Sales in the Eastern U.S. appear to be even lower. Is there any discussion between EPA and the California Air Resources Board (CARB) to lower the ZEV standards to reflect actual demand?

The ZEV program includes a number of flexibilities designed to give manufacturers greater freedom in meeting the program goals while providing a diverse range of products to serve consumer needs. The EPA believes that is far too early to reach any conclusions regarding goals more than 10 years in the future.

47. EPA stated that the Interagency Working Group (IWG) on the Social Cost of Carbon (SCC) was convened by the Council on Economic Advisors and the Council on Environmental Quality. To your knowledge, were minutes of these meetings kept?

The Interagency Working Group on the Social Cost of Carbon was convened by the Council of Economic Advisors and the Office of Management and Budget. Given that I did not attend any of these meetings, I am unaware as to whether anyone kept meeting minutes. I do not recall ever receiving written transcripts or other documents that detail the meeting minutes.

GAO recently completed a review of the process used to develop the U.S. Government SCC estimates. It concluded that the working group (1) used consensus-based decision-making, (2) relied on existing academic literature and modeling, and (3) took steps to disclose limitations and incorporate new information by considering public comments and revising the estimates as updated research became available. The report made no recommendations.

GAO concluded that the level of documentation for this interagency exercise was equivalent to those from other comparable interagency exercises.

48. While EPA previously stated that non-governmental groups did not participate in IWG meetings, were these groups ever consulted? Was information provided to them for comment prior to the convening of IWG meetings?

Many agencies participated in the IWG and I am unaware as to whether and to what extent they consulted non-governmental groups outside of the IWG meetings. One of the three models used to develop the SCC estimates in 2009-2010 was run through a contract managed by EPA. The contractor did not participate in any of the IWG meetings but rather received instructions for how to conduct the model runs (e.g., specification of the three input assumptions as determined by the IWG). Also, while it is not unusual for EPA professional staff to consult external scientists and economists with technical questions in the course of their research and analysis, I cannot confirm whether any of their technical dialogues included explicit discussions about the IWG meetings.

In the GAO report mentioned above, GAO also highlighted the various opportunities for public input on SCC in general and the interagency estimates, beginning with public comments received prior to the 2008 court decision and those received in response to the numerous rulemakings that used a set of interim SCC estimates based on published literature.

49. Please explain in detail how the decision was made that the IWG would not develop its own models or data for the 2010 SCC estimates or the 2013 updates?

The 2010 TSD for the USG SCC estimates provides documentation of the interagency decisions and the 2013 TSD documents the technical update. The TSDs clearly demonstrate the interagency group's commitment to rely on models and data from the peer-reviewed literature, as well as the value the interagency group placed on the variation in the approaches embedded in each of the three models. Of note, the 2010 TSD explains that DICE, FUND, and PAGE are by far the most widely used and widely cited models in the economic literature that can link physical impacts to economic damages for the purposes of estimating the SCC. The 2010 TSD also reported on the interagency group's review of relevant assessments, such as the National Academies of Science (NAS) 2010 report, which identified the three models as "the most widely used impact assessment models". Furthermore, the 2010 and 2013 TSDs for the USG SCC estimates provide exhaustive documentation of how the USG's review identified, evaluated, and adopted the data, assumptions, and analytical framework used to develop the SCC estimates.

50. Please explain in detail how many EPA rulemakings since 2009 have not included the 7% discount rate as required by OMB Circular A-4. Please provide an updated list of EPA rulemakings that have included, utilized, or cited the 2010 SCC estimates or the 2013 updates.

All rulemaking actions that estimate economic impacts present estimates at 3 and 7 percent; those that include monetized CO_2 impacts discount those impacts at 2.5, 3, and 5 percent.

Table 1 lists the EPA regulatory actions that have used the USG SCC estimates.

Table 1. EPA Regulatory Actions Using USG SCC Estimates

Federal Register	Rule Name	Action
Interim USG SCC Estimates: 2009-2010 EPA Rulemakings		
9/28/2009	EPA/DOT Light Duty Vehicle GHG and CAFE Standards (2012-2016)	Proposal
4/26/2010	EPA Renewable Fuel Standard Program (RFS2)	Final
6/21/2010[1]	EPA Disposal of Coal Combustion Residuals From Electric Utilities	Proposal
USG SCC Estimates based on 2010 TSD: 2010-2013 EPA Rulemakings		
5/7/2010	EPA/DOT Light Duty Vehicle GHG and CAFE Standards (2012-2016)	Final
8/2/2010	EPA Federal Implementation Plans To Reduce Interstate Transport of Fine Particulate Matter and Ozone	Proposal
9/9/2010	EPA Cement NESHAP/NSPS (CO2 disbenefits) (under reconsideration)	Final
10/14/2010	EPA Sewage Sludge Incinerators NSPS/Emissions Guidelines (CO2 disbenefits)	Proposal
3/14/2011	EPA (supp) NESHAP: Mercury Cell Chlor-Alkali Plants - Amendments	Proposal
3/21/2011	EPA Sewage Sludge Incinerators NSPS/Emissions Guidelines (CO2 disbenefits)	Final
3/21/2011, Reconsid: 1/31/13	EPA NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (CO2 disbenefits)	Final
8/8/2011	EPA Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals (vacated by courts, in review)	Final
9/15/2011	EPA/DOT Medium-Heavy Duty Vehicles GHG and CAFE Standards	Final
12/1/2011	EPA/DOT Light Duty Vehicle GHG and CAFE Standards (2017-2025)	Proposal
12/23/2011	EPA Commercial and Industrial Solid Waste Incineration Units: Reconsideration and Proposed Amendments; Non-Hazardous Secondary Materials That Are Solid Waste (CO2 disbenefits)	Proposal
2/16/2012	EPA MATS Rule	Final
4/13/2012	EPA GHG Standards for New Stationary Source EGUs	Proposal
10/15/2012	EPA/DOT Light Duty Vehicle GHG and CAFE Standards (2017-2025)	Final
6/7/2013	EPA Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category	Proposal
Updated USG SCC Estimates based on 2013 TSD: 2014 EPA Rulemakings		

[1] The final USG SCC estimates were not published in time for EPA to redo their analysis for the Coal ash proposed rule. Included in the proposed rulemaking is an acknowledgement of the USG values and the Agency intent to use them in the Final rule. See p. 29, http://www.gpo.gov/fdsys/pkg/FR-2010-06-21/pdf/2010-12286.pdf.

1/8/14	EPA GHG Standards for New Stationary Source EGUs (sensitivity analysis only)	Proposal
6/18/14	EPA: Emission Guidelines for GHG Emissions from Existing Stationary Sources (Electricity Generating Units)	Proposal

51. Please explain in detail your involvement in the IWG, including whether you signed off on or gave verbal approval for any contributions made by your office, including the technical assistance and modeling provided by OAP.

I do not recall any personal involvement with the Interagency Working Group.

52. Congress created the Clean Science Advisory Committee (CASAC) under the Clean Air Act giving it certain responsibilities. Specifically, there are five items listed in Section 109 that CASAC is required to do every 5 years as part of the process for reviewing the National Ambient Air Quality Standards (NAAQS). One instructs CASAC to advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of the NAAQS. Please explain in detail the number of times CASAC has advised the Administrator of the adverse economic and energy effects that may result from the responses necessary to meet the NAAQS.

CAA section 109 (d)(2)(C)(iv) states that one of the committee's duties is to "advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of [NAAQS]." The provision does not require that CASAC provide this advice as part of the five year review cycle. Moreover, when the Supreme Court in Whitman v. American Trucking Associations, 531 U.S. 457 (2001), held that EPA could not consider implementation and other costs in setting the NAAQS, the Court further held that any CASAC advice related to costs of implementation under 109 (d)(2)(C)(iv) would not be relevant to EPA's review of the NAAQS. We are currently not aware of a particular instance in which CASAC has advised the Administrator of the adverse economic and energy effects that may result from the responses necessary to meet the NAAQS.

53. It is my understanding that CASAC reviews documents prepared by EPA staff and responds to charge questions that also are presented by the Agency. Please explain in detail those studies and charge questions provided to CASAC by EPA, including during the current Ozone NAAQS review, that examine the adverse social, economic, or energy effects which may result from various strategies for attainment and maintenance of the NAAQS.

EPA is prohibited by law from considering costs of implementation in setting the NAAQS. The U.S. Supreme Court ruled in Whitman v. American Trucking Associations, 531 U.S. 457 (2001), that the EPA may not consider the costs of implementation in setting standards that are requisite to protect public health and welfare, as provided in section 109(b) of the Clean Air Act. Therefore, as part of the current ozone review we have not provided CASAC with studies or charge questions that examine the adverse social, economic, or energy effects that may results from various strategies for attainment of the NAAQS. The Clean Air Act does provide state and local officials in nonattainment areas the ability to consider several factors, including social, economic, and energy impacts, when designing their state implementation plans to implement the NAAQS.

54. Please explain how as Assistant Administrator for the Office of Air and Radiation you will make publicly available the transcript, minutes, and webcast of CASAC meetings, including the CASAC Ozone Review Panel Meeting held March 25-27, 2014.

The EPA's Science Advisory Board Staff Office, which is responsible for supporting the Clean Air Scientific Advisory Committee, makes publicly available information about its meetings and advice as required by the Clean Air Act and the Federal Advisory Committee Act, and implementing regulations. This information can be found at http://www.epa.gov/casac/.

Senator James Inhofe

1. EPA responsibility?

   a. Ms. McCabe, if we find ourselves in a scenario where there are electricity blackouts during hot summer months around the country because of the EPA's policies, will you and the EPA take responsibility?

For more than 40 years, the Clean Air Act has fostered steady progress in reducing air pollution, allowing Americans to breathe easier and live healthier – all while the economy has more than tripled and an affordable, reliable energy system has continued to operate. We remain committed to maintaining all of those outcomes.

2. Electricity Reliability

   This brings me to another question about the broader impacts EPA's regulations have on the economy and on electricity generation.

   As we discussed in my office, 75% of our electricity comes straight from fossil fuels. About a third of that is from coal.

   EPA's greenhouse gas NSPS rules for new and existing generators make it impossible for us to have a diverse fuel supply going forward. With natural gas prices so low, nuclear has a difficult time competing, and your rules make it impossible to build a new coal fired power plant.

   You mentioned in our meeting that the rules are designed to give flexibility to states to implement the rules. But it seems that the only flexibility you're interested in is from renewables.

   a. Don't you think we're playing a dangerous game here with rate payers by relying so much on renewable fuels to hit the goals you're mandating in your rules?

   b. Just yesterday Administrator McCarthy said that "nothing we do can threaten [grid] reliability." With all of the looming plant closures and the many more that will come as a result of the greenhouse gas regulations, what have you done to ensure this is true?

   c. Are you willing to revisit and modify the Utility MACT rule and vitiate the 316(b) rule and your GHG regs so that the electricity grid's reliability isn't threatened and price shocks and black outs don't become the new reality?

EPA's Clean Air Act power plant rules provide flexibility to regulated entities to help ensure a path forward for generating units of all types. EPA analyses conducted in support of its power plant rules project that fuel diversity will be maintained in the future, with coal and natural gas projected to be the two largest sources of electricity generation in 2030. EPA analysis has shown that even areas experiencing coal retirements will also retain significant coal capacity and an adequate mix of diverse generating resources. EPA works closely with DOE, FERC, grid planning authorities, and other entities with expertise related to electric reliability to help ensure that the agency's rules are implemented in a manner consistent with maintaining electric reliability.

3. Section 321(a)

Ms. McCabe, in our meeting last week, I asked you why the analysis required under Section 321(a) of the Clean Air Act isn't being abided by. This is the part that requires the EPA to measure the number of jobs being lost across the whole economy because of the Clean Air Act rules. You said that EPA did not have the same interpretation of the law.

Behind me, I have Section 321(a) on a chart, and it says, "The Administrator shall conduct continuing evaluations of potential loss or shifts of employment which may result from the administration or enforcement of the provisions of this Act and applicable implementation plans..."

a. Do you find anything vague about the plain language of this law that would enable the EPA to not keep track of the continuing impacts of the rules promulgated under the Clean Air Act?

CAA section 321 authorizes the Administrator to investigate, report and make recommendations regarding employer or employee concerns that requirements under the Clean Air Act will adversely affect employment. In keeping with congressional intent, EPA has not interpreted this provision to require EPA to conduct employment investigations in taking regulatory actions. Section 321 consistently has been interpreted by EPA to provide a mechanism for investigating specific allegations by particular employers or employees that specific requirements applied to individual companies would result in layoffs. EPA has found no records indicating that any Administration since 1977 has interpreted section 321 to require job impacts analysis for rulemaking actions. Nevertheless, since 2009 EPA has focused increased attention on consideration and (where data and methods permit) assessment of potential employment effects as part of the routine regulatory impact analyses (RIAs) conducted for each major rule.

b. This seems very straight forward. Would you support legislation that requires EPA to look at the whole economy and not just the regulated entities like you do now?

The Administration has not taken a position on legislation proposing such a requirement.

4. Ozone NAAQS:

a. Ms. McCabe, when do you plan to propose your next round of Ozone NAAQS?

b. Do you think it's wise that the statute does not allow EPA to consider the costs when updating NAAQS?

c. Would you support legislation that requires EPA to consider the economic impact of lowering a NAAQS?

d. What steps are you taking to ensure CASAC considers the environmental and social impacts of a lower Ozone standard as required under the Clean Air Act?

e. Will you agree to take comments on retaining the current standard for ozone if you propose a change in the ozone standard?

EPA has not yet reached a decision about what revisions to the ozone standards may be appropriate in light of the current scientific evidence. EPA intends to issue a proposed decision addressing the question of whether it is appropriate to revise the current primary

and secondary ozone NAAQS by December 1, 2014 (as required by court order), and the public will have a chance to review and comment on the proposal before EPA issues a final rule.

The Clean Air Act directs EPA to set NAAQS at a level requisite to protect public health with an adequate margin of safety and to protect the public welfare from any known or anticipated adverse effects of air pollutants. These standards are based on consideration of the most up-to-date scientific evidence and technical information, advice from CASAC, and public comments. As part of the ongoing review of the ozone NAAQS, EPA will evaluate the extent to which it is appropriate to revise these standards in order to protect against adverse public health and welfare effects.

EPA is prohibited by law from considering costs of implementation in setting NAAQS. The U.S. Supreme Court ruled in Whitman v. American Trucking Associations, 531 U.S. 457 (2001), that the EPA may not consider the costs of implementation in setting standards that are requisite to protect public health and welfare, as provided in section 109(b) of the Clean Air Act. However, the Clean Air Act gives state and local officials in nonattainment areas the ability to consider several factors, including employment impacts and costs of controls, when designing their state implementation plans to implement the NAAQS.

5. Methane Strategy

Ms. McCabe, just two weeks ago the President released his comprehensive methane strategy. We spoke about this when you came into the office. It seems to me that the Agency is rushing to a decision to regulate the oil and gas industry's methane emissions, even though that might not be necessary.

I'm concerned you aren't relying on good data when it comes to the oil and gas emissions estimates. I believe you rely too much on computer models and aerial measurements and not enough on surface level measurements. EPA recently made major reductions in the amount of methane emissions that are estimated to come from fracking, for instance, which I applaud.

Right now there are a number of studies being done that will conduct these surface level methane emission measurements that will be reliable, accurate, and scalable across the entire country. It will provide much better oil and gas data than what you have now.

a. Will you wait to make a decision to regulate until you have this new data at your disposal?

As outlined in the Strategy to Reduce Methane Emissions, the EPA intends to build on the success of our voluntary programs in reducing methane emissions from the oil and gas sector. We agree on the need for good information. That is why, on April 15, 2014, the EPA released for external peer review five technical white papers on potentially significant sources of emissions in the oil and gas sector. The white papers focus on technical issues covering emissions and mitigation techniques that target methane and volatile organic compounds (VOCs). The EPA will use the papers, along with the input we receive from the peer reviewers and the public as well as additional information that comes from studies that are currently underway or that maybe conducted in the future, to determine how to best pursue additional reductions from these sources. The public comment period closed on June 16, 2014, and EPA is in the process of evaluating the information and comments received.

6. NAAQS in General

EPA has recently issued new NAAQS without, at the same time, giving States and businesses implementation and permitting information. State Implementation Plans can take years to develop, but new NAAQS standards are effective immediately.

a. Will you commit to EPA issuing updated implementation tools and policies at the same time a new NAAQS is issued, so that businesses can secure the permits they need?

The Clean Air Act directs EPA to set national ambient air quality standards at a level requisite to protect public health and public welfare. That said, it is important that States, regulated parties, and the general public have the information they need to achieve and maintain these health-based standards. EPA has worked and will continue to work to provide the best tools and information feasible on timeframes that meet the states' needs as much as possible.

7. Sue and Settle

EPA often settles lawsuits and agrees to do things by a certain deadline.

a. Will you commit to allowing industry to participate in these settlement discussions that will impact them? Specifically with NY methane suit – will you allow oil and gas industry to be at the table?

A decision about who can participate in settlement discussions would be a litigation decision, and litigation decisions in the representation of the United States are led by the Department of Justice. Where EPA is the client agency, the EPA lead for these decisions is the Office of General Counsel. Regardless of who participates in the initial settlement discussions, when EPA has been sued under the Clean Air Act, EPA solicits public comment on any proposed settlement before agreeing to a final settlement.

Senator Jeff Sessions

1. Prior to joining EPA, did you file any written comments with EPA in relation to any environmental regulatory or policy matter, whether on your own behalf or on behalf of any agencies or organizations? If so, please provide my office with copies of any such written comments.

   During my career, while working as the Executive Director of Improving Kids' Environment, Inc., and in various capacities in the Indiana Department of Environmental Management and working for the Commonwealth of Massachusetts, I have worked on comments that were filed with the EPA on regulatory and policy matters. These comments are part of the public record and are available in the docket accompanying the individual EPA actions.

2. Using data from the U.S. Energy Information Administration, it is known that, from 2005 to 2011, total CO_2 emissions from the consumption of energy decreased in the United States by approximately 8.5% and decreased in the European Union by approximately 10%, while CO_2 emissions increased globally by 15%, led by an increase in China of 60% and an increase in India of 46%. While the U.S. and E.U. reduced their total CO_2 emissions from energy consumption by 955 million metric tons from 2005 to 2011, China and India increased their emissions by a combined 3,796 million metric tons. In other words, for every one ton of CO_2 reduced in the U.S. or E.U., China and India increased their emissions by four tons. In light of these figures, do you believe that reductions in U.S. CO_2 emissions, alone, will have any meaningful impact on global temperatures and climate change? If so, please describe the measurable impact on global temperatures and climate change that would be achieved through reductions in U.S. emissions, and the data that supports your view in this regard.

   Climate change is a global problem that will require a global solution. All nations that are significant emitters of greenhouse gases will need to take the steps necessary to reduce their emissions in the near and long term. The United States, as the second largest emitter of greenhouse gases after China, must show leadership among the developed nations by taking steps necessary to reduce our emissions, while at the same time encouraging and facilitating the reduction of emissions from other countries. US emission reductions achieved since 2005, and the reductions expected by 2020, when combined with efforts in the EU, China, India and other major emitting countries, will help to keep us on track for a significant reduction in global greenhouse gas emissions needed by 2050, and reduce the impacts on global temperatures and climate change.

3. Do you believe that CCS systems have been "adequately demonstrated" as a technology for reducing CO_2 emissions from fossil fuel-fired power plants? Are there any fully operational coal-fired power plants in the United States, or the world, currently using CCS technology?

   The EPA has proposed to determine that CCS is technically feasible for new coal-fired power plants, because all of the major components of CCS – the capture, the transport, and the injection and storage – have been demonstrated and are currently in use at commercial scale. For example there are several industrial projects in the United States that are currently capturing the CO2 for use in enhanced oil recovery (EOR) or other applications. There have been numerous smaller-scale projects that have demonstrated the technology, and there are several full-scale projects – both in the U.S. and internationally – that are

under construction today. Thus, the EPA has proposed to determine that partial CCS is the Best System of Emission Reduction (BSER) for new coal-fired power plants.

4. Please provide any other instances where, pursuant to authority under CAA Section 111, EPA has mandated technologies not yet used on a commercial basis.

   In previous NSPS regulations, EPA has set limits based on analysis of technologies, their capability, and whether they could be transferred between similar processes. In those cases, operating units in the Clean Air Act category were not necessarily meeting the limits we proposed, but similar units in the United States or abroad were. In the 1990's, EPA determined that Selective Catalytic Reduction (SCR) was the Best System of Emissions Reduction for industrial boilers and utility boilers. At that time, SCR had been used on some boilers in the United States and internationally. In the United States, SCR had been used on a small number of utility boilers but not on industrial boilers. Some of the regulated entities argued that SCR was not adequately demonstrated for industrial boilers, and therefore could not be the best system. The same parties also claimed SCR would be too expensive, even though the unit and technology configuration was practically identical between the two types of boilers. That is similar to the approach we have taken in the proposed Carbon Pollution Standards, with an important difference. In our current rule, CCS has been, or is in the process of being, used on utility units at or beyond the level we have proposed.

5. Seventeen State Attorneys General recently released a white paper explaining that under the Clean Air Act, the States, and not EPA, determine what constitutes "adequately demonstrated" technology for the purposes of setting performance standards for existing power plants. Do you agree with this legal analysis by these State Attorneys General?

   Under EPA's long-standing regulations implementing Section 111(d) of the Clean Air Act, it is the responsibility of the Administrator to determine the Best System of Emissions Reduction that has been adequately demonstrated.

6. Will EPA continue to follow existing statutes and regulations and allow States to set less stringent GHG standards for existing power plants in light of "other factors" such as unreasonable costs or a power plant's remaining useful life?

   The Clean Power Plan proposal provides states with the flexibility to determine how to achieve the reductions in the state goals and to adjust the timing in which reductions are achieved, in order to address key issues such as cost to consumers, electricity system reliability and the remaining useful life of existing generation assets.

7. An academic article entitled, "Information Manipulation and Climate Agreements," which was published in February 2014 in the *American Journal of Agricultural Economics*, states: "Linking climate change to extreme weather may be a powerful way to motivate people... The IPCC has tended to over-generalize its research results and accentuate the negative side of climate change... Taken together, considerable evidence suggests that international mainstream media and pro-environmental organizations have the tendency to accentuate or even exaggerate the damage caused by climate change... In this article, we suggest that information manipulation, which is generally overlooked in the literature, can be a novel and helpful mechanism for resolving the climate problem." Some news outlets picked up on this scientific report. In response, the researchers clarified that "we never advocate for lying on climate change," although they conceded in a posting on-line: "Our 'rationale' is essentially an explanation on why the

media has incentives to accentuate or even exaggerate climate damage." Similarly, in a *New York Times* op-ed ("Global Warming Scare Tactics") from April 8, 2014, Ted Nordhaus and Michael Shellenberger outline the effect that climate change alarmism has on public opinion. When scientists and public officials repeatedly exaggerate the link between anthropogenic climate change tied to carbon dioxide and increasing likelihood, severity, and frequency of natural disasters, the writers note that "more than a decade's worth of research suggests that fear-based appeals about climate change inspire denial, fatalism and polarization." This is borne out in the increase since 2006 in the percent of Americans who believe the media are exaggerating global warming claims, as noted in the op-ed.

a. Do you believe that exaggerating, manipulating data, or lying to promote the Administration's proposed actions on climate change is not acceptable?

b. Do you agree that, as a high government official, you must always speak truthfully about the scientific data and not exaggerate or manipulate data to promote a political, environmental, or other agenda?

c. Was the President correct when he asserted on November 14, 2012, that "the temperature around the globe is increasing faster than was predicted even 10 years ago"?

d. Was the President correct when he asserted on May 29, 2013, that "the climate is warming faster than anybody anticipated five or 10 years ago"?

e. Please provide a chart showing both the level of warming predicted ten years ago and the actual global temperature changes over the last ten years.

f. During the February 15th broadcast of *Morning Edition*, National Public Radio (NPR) reported on the President's trip to California and explained: "[Dr.] Holdren also says a key part of the President's message will be that global warming is making droughts more frequent and severe." In your view, are droughts becoming more frequent and severe? If yes, please provide the data you would rely upon to support that assertion.

g. Dr. Roger Pielke testified in our committee last year: "It is misleading, and just plain incorrect, to claim that disasters associated with hurricanes, tornadoes, floods, or droughts have increased on climate timescales either in the United States or globally." Have you reviewed the scientific reports prepared by Dr. Pielke? If not, will you review them and state if you agree or disagree with this statement?

EPA's actions are and must be based on sound science, a transparent record, and the best available information, and I am committed to ensuring that this is the case for the actions within my responsibility.

It is important to distinguish among different kinds of extreme weather events, between regional versus national trends, and among trends in frequency, intensity, duration, or other variables. For example, there are regional differences in drought trends. This means that even in a year when the national measure of drought does not show a significant increase from the average, some parts of the U.S. may be experiencing extreme drought and other parts may be experiencing wetter conditions.

The USGCRP National Climate Assessment (NCA), released on May 6, 2014, found that, "Certain types of extreme weather events with links to climate change have become more

frequent and/or intense, including prolonged periods of heat, heavy downpours, and, in some regions, floods and droughts." According to the NCA, heavy downpours in the Northeast, Midwest, and upper Great Plains have increased by more than 30% above the 1901-1960 average. While much of the country experienced the highest number of short-duration heat waves in the 1930s, the recent multi-month extreme heat in the United States has been unprecedented since records started in 1895, with recent heat waves in Texas and the Midwest setting records for highest monthly average temperatures. Drought in the West has also been exceptional in comparison to the historical record. While, nationally, there have been no trends in flooding, the regional picture is different, with flooding increasing in the North and East and decreasing in the Southwest. The intensity, frequency, and duration of North Atlantic hurricanes has also increased since the early 1980s, when satellite data became available, though the relative contribution of human and natural causes to these changes is still uncertain, as are trends before the satellite era. Intensity and rainfall rates of hurricanes are projected to continue increasing. Higher sea levels will also lead to increased damages from hurricane storm surges.

The NCA also found that, "Tree ring data suggests that the drought over the last decade in the western U.S. represents the driest conditions in 800 years" and that, "In the Southwest, drought has been widespread since 2000; the average value of the PDSI during the 2000s indicated the most severe aver-age drought conditions of any decade."

8. In a March 12, 2014 hearing before the House Science Committee, you were asked to explain "some of the costs associated with the lack of action to address climate change and increasing emissions." You responded: "There are costs to our economy and to society from the impacts of climate change that is already happening. In 2013, there were seven extreme weather events. Which I think is a nice way of saying great, big, huge horrible storms that cost the economy over a billion dollars each. This is a real economic impact on our communities, our families across the country... The scientific community has identified a number of impacts of climate change. Among those are increased frequency and intensity of extreme weather events."

   a. Please describe with specificity the statistical evidence supporting your view that we are experiencing "increased frequency and intensity of extreme weather events."

   b. Please list the seven extreme weather events in 2013 that you were referring to in your House testimony.

   c. Does the statement quoted in subparagraph (a) reflect your current views?

The USGCRP National Climate Assessment (NCA), released on May 6, 2014, found that, "Certain types of extreme weather events with links to climate change have become more frequent and/or intense, including prolonged periods of heat, heavy downpours, and, in some regions, floods and droughts." According to the NCA, heavy downpours in the Northeast, Midwest, and upper Great Plains have increased by more than 30% above the 1901-1960 average. While much of the country experienced the highest number of short-duration heat waves in the 1930s, the recent multi-month extreme heat in the United States has been unprecedented since records started in 1895, with recent heat waves in Texas and the Midwest setting records for highest monthly average temperatures. Drought in the West has also been exceptional in comparison to the historical record. While, nationally, there have been no trends in flooding, the regional picture is different, with flooding increasing in the North and East and decreasing in the Southwest. The intensity, frequency, and duration of North Atlantic hurricanes has also increased since the early 1980s, when satellite data

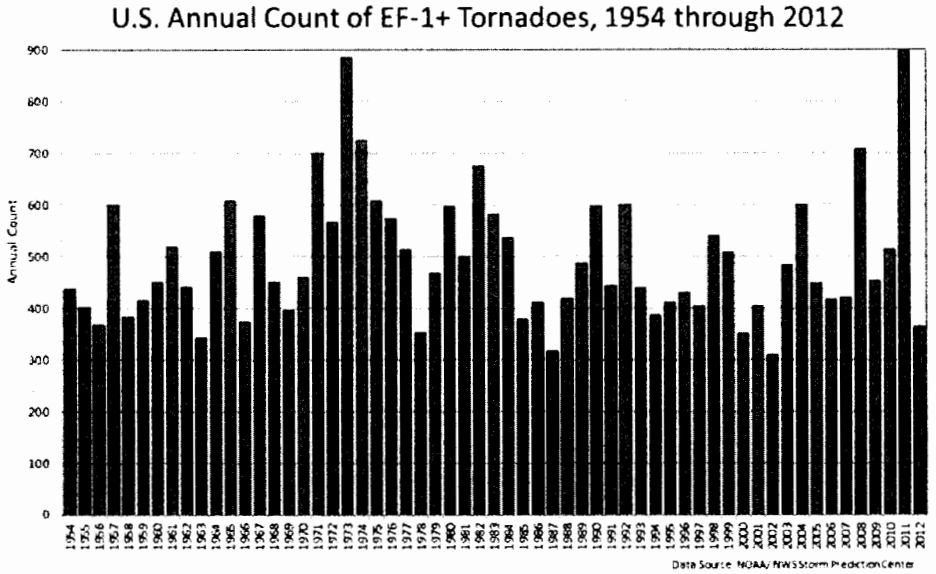
became available, though the relative contribution of human and natural causes to these changes is still uncertain, as are trends before the satellite era. Intensity and rainfall rates of hurricanes are projected to continue increasing. Higher sea levels will also lead to increased damages from hurricane storm surges.

The NCA is clear and transparent regarding the evidence that it considered in making its assessment, and provides the appropriate context, limitations, and level of uncertainty for their findings. For example, the NCA clearly describes when an impact is relevant to regional versus national scales, or when an extreme weather phenomenon has been observed or is projected to increase in intensity, frequency, duration, timing, or some combination of these measures.

The seven "billion dollar extreme weather/climate events" that occurred in 2013 are listed by NOAA's National Climatic Data Center at https://www.ncdc.noaa.gov/billions/events. These events include the western drought/heat wave from spring to fall, the Colorado flooding in September, and severe weather in the southeast in March.

9. According to data from the National Severe Storms Laboratory, from May 2012 to April 2013, the U.S. experienced a record low number of tornadoes (EF-1 or stronger) for a 12-month period. While the National Weather Service records for 2013 tornadoes are not yet complete, the total number of tornadoes (EF-1 or greater) in 2012 was far below the total number from 50 years ago (1962). In fact, the U.S. had more tornadoes in 45 out of the last 50 years than we had in 2012.

   a. Are you familiar with the chart below?



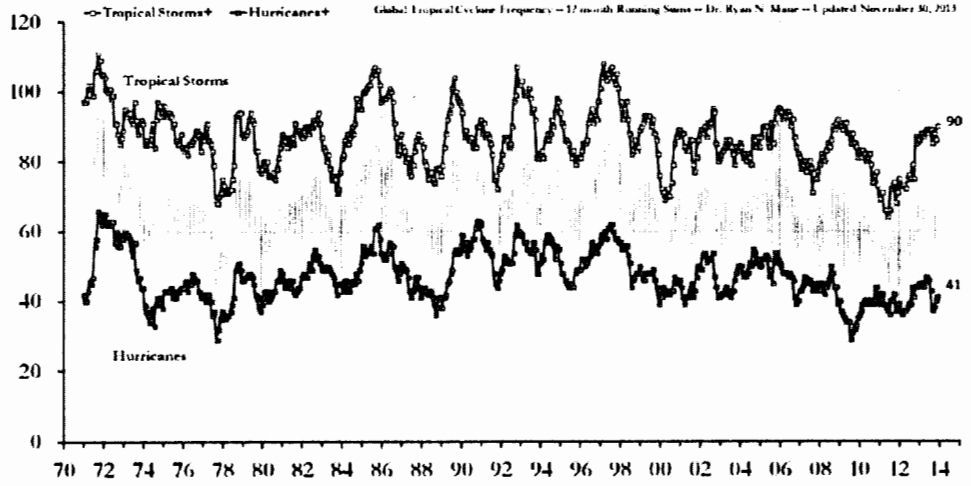
   b. In your view, is the United States experiencing more frequent tornadoes now than in the past 50 or 100 years? Please provide data that would support your view.

The USGCRP National Climate Assessment (NCA), released on May 6, 2014, found that, "winter storms have increased in frequency and intensity since the 1950s, and their tracks have shifted northward over the United States. Other trends in severe storms, including the intensity and frequency of tornadoes, hail, and damaging thunderstorm winds, are

uncertain and are being studied intensively." According to the NCA, the data on severe thunderstorm phenomena (including tornadoes) are not of sufficient quality to determine long-term trends. In addition, these phenomena occur on scales smaller than the resolution of climate models, which makes it challenging to project future changes. However, while the relationships between tornadoes and climate change are still being explored, the NCA does cite a recent study that suggests a projected increase in the frequency of conditions favorable for severe thunderstorms (which are often associated with tornadoes).

10. It has been eight years since the last major hurricane struck the United States—a lull that experts call an "extended and intense hurricane drought." Even the **IPCC's Fifth Assessment Report**, which was just released, acknowledges: "Current data sets indicate no significant observed trends in global tropical cyclone frequency over the past century."

    a. Are you familiar with the charts below?



Updated version of chart referenced in Written Testimony of Dr. Roger Pielke, Jr. (7 18 2013), attributed to Ryan Maue.

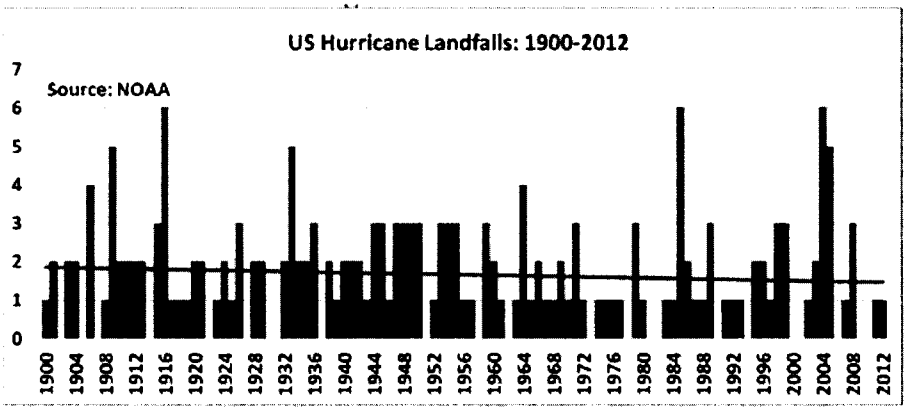


Figure 3a. Number of landfalling US hurricanes from 1900-2012. The red line shows the linear trend, exhibiting a decrease from about 2 to 1.5 landfalls per year since 1900. Source: NOAA.[12]

b. In your view, is the United States experiencing more frequent hurricanes over the last 50 or 100 years? Please provide data that would support your view.

c. Dr. Roger Pielke of the University of Colorado in Boulder testified in our committee last year: "Hurricanes have not increased in the US in frequency, intensity or normalized damage since at least 1900." Do you agree with this statement?

The USGCRP National Climate Assessment (NCA), released on May 6, 2014, found that the "intensity, frequency, and duration of North Atlantic hurricanes, as well as the frequency of the strongest (Category 4 and 5) hurricanes, have all increased since the early 1980s. The relative contributions of human and natural causes to these increases are still uncertain. Hurricane-associated storm intensity and rainfall rates are projected to increase as the climate continues to warm." Though the NCA found an increase in the intensity, frequency, and duration of North Atlantic hurricanes, they note that there has been no trend in the frequency of global tropical cyclones or hurricanes making landfall in the U.S. Note, however, that it is important to distinguish frequency from other measures of hurricanes, including intensity, rainfall, size, duration, or resulting storm surges. All of these measures of hurricanes can affect the resulting damage incurred. For example, a large storm that does not make direct landfall could still cause damaging storm surge, particularly in areas that have experienced sea level rise. Additionally, the numbers of landfalling hurricanes are small compared to the total number of hurricanes that form in an ocean basin, which means there is not enough historical data to make conclusions about long-term trends in landfalling hurricanes. The NCA does note that, historically, fewer storms have hit land in warm years despite there being more overall storms that formed in those years, but does not draw conclusions about future trends in landfalling storms.

11. During the February 15th broadcast of Morning Edition, National Public Radio (NPR) reported: "[Dr. John] Holdren also says a key part of the President's message will be that global warming is making droughts more frequent and severe." Dr. Holdren is the President's top science advisor. Yet Dr. Pielke and other experts in our committee have shown, with actual data, that claims that we are experiencing more frequent droughts are "misleading, and just plain incorrect."

a. Do you believe that the United States is experiencing more frequent or severe droughts than in the past 50 or 100 years?

b. American Enterprise Institute (AEI) has evaluated the official drought data and found: "The Palmer Drought Severity Index shows no trend over the record period beginning in 1895 in terms of drought; more areas in the United States have experienced an increase in soil moisture than a decline." Do you recognize the Palmer Drought Severity Index as providing the best available data on present and historic drought severity?

c. The IPCC's Fifth Assessment Report found: "In summary, the current assessment concludes that there is not enough evidence at present to suggest more than low confidence in a global-scale observed trend in drought or dryness (lack of rainfall) since the middle of the 20th century due to lack of direct observations, geographical inconsistencies in the trends, and dependencies of inferred trends on the index choice. Based on updated studies, [IPCC 4th Assessment] conclusions regarding global increasing trends in drought since the 1970s were probably overstated..." Do you believe there is enough evidence to assert with confidence that the United States, or the world, has been experiencing more frequent and severe droughts as a result of climate change and increases in CO_2 levels in the atmosphere?

d. Despite the clear weight of the scientific evidence, Dr. Holdren responded to my questioning at our committee hearing in February by diminishing the value of the research and views of respected scientists, including Dr. Roger Pielke and Dr. Roy Spencer. In fact, after I read from the testimony of Dr. Pielke and Dr. Spencer about droughts—the same testimony referenced above—Dr. Holdren responded: "The first few people you quoted are not representative of the mainstream scientific opinion on this point." Do you believe that Dr. Pielke's view [i.e., that "It is misleading, and just plain incorrect, to claim that disasters associated with hurricanes, tornadoes, floods, or droughts have increased on climate timescales either in the United States or globally."] is in the mainstream of scientific opinion on this point? If it is not, please cite the "mainstream" authorities that support a different conclusion than his.

It is important to distinguish among different kinds of extreme weather events, between regional versus national trends, and among trends in frequency, intensity, duration, or other variables. For example, there are regional differences in drought trends. This means that even in a year when the national measure of drought does not show a significant increase from the average, some parts of the U.S. may be experiencing extreme drought and other parts may be experiencing wetter conditions. The NCA also found that, "Tree ring data suggests that the drought over the last decade in the western U.S. represents the driest conditions in 800 years" and that, "In the Southwest, drought has been widespread since 2000; the average value of the PDSI during the 2000s indicated the most severe aver-age drought conditions of any decade."

Similarly, there are regional differences in flood and precipitation trends, but the data are clear that heavy downpours have increased in many areas of the country. While the data regarding tornadoes are not of sufficient quality to determine long-term trends, the intensity, frequency, and duration of North Atlantic hurricanes have increased since the early 1980s.

Dr. Holdren also expanded on his testimony by providing the following document, to which I would refer you: http://www.whitehouse.gov/sites/default/files/microsites/ostp/critique_of_pielke_jr_statements_on_drought.pdf. Dr. Holdren discusses a number of aspects of observed and projected drought trends, being careful to distinguish regional trends from global trends. In addition, he discusses both the value and limitations of the Palmer Drought Severity Index, which is

one of the most widely used indices of drought, and discusses the most recent literature on the subject of detecting drought trends.

12. On December 17, 2013, all of my EPW Republican colleagues joined my letter to Administrator McCarthy asking for an accounting of the tax dollars that were wasted on the ozone reconsideration process that was never completed. This was a request I have been making for two years. In January, you wrote me a letter refusing to answer my question, stating: "it is difficult for [EPA] to estimate, with any meaningful precision, [those] expenses..." Please answer the following related questions in the affirmative or negative:

    a. Was EPA mandated by law to reconsider the 2008 ozone standard in 2010-2011?

    b. Did activist environmental groups urge EPA to reconsider the 2008 ozone standard?

    c. Did EPA spend taxpayer funds to reconsider the 2008 ozone standard?

    d. Is EPA capable of stating how much it spent in total on that process? Could EPA provide an estimate?

    e. Can EPA tell us how many employee-hours were spent on the ozone reconsideration?

    f. Did John Beale provide assistance, input or any other work on the ozone reconsideration process?

    g. Did EPA hold public meetings in Virginia, Texas, and California about the ozone reconsideration? Can EPA tell us how much it spent holding those meetings?

    h. Did EPA employees and officials incur travel costs from 2009-2011 as part of the ozone reconsideration process? Can EPA say how much?

    i. Did EPA use any outside contractors and/or university/college researchers to assist with any aspects of the ozone reconsideration? Can you say how much was spent on such persons?

    j. Did EPA receive thousands of public comments in response to the proposal?

    k. Did EPA spend time and money to study and evaluate those comments? How much?

    l. Does EPA track how much it spends on any regulation or rulemaking process?

    m. Did you agree with the President's decision in 2011 to not move forward with the reconsideration of the ozone standard?

The health effects associated with ozone exposure include respiratory health problems ranging from decreased lung function and aggravated asthma to increased emergency department visits, hospital admissions and premature death. To protect against these effects, the Clean Air Act requires EPA to review the NAAQS and their scientific basis at least every five years to determine whether revisions are appropriate.

EPA received input from a variety of stakeholders, both encouraging and discouraging us from reconsidering the standards. Then-EPA Administrator Lisa Jackson chose to reconsider the 2008 standards to ensure the nation's air quality standards were clearly

grounded in science, protected public health with an adequate margin of safety, and were sufficient to protect the environment.

The EPA staff members who worked on the reconsideration of the 2008 standards are dedicated to understanding the science of public health problems from air pollution and advising the Administrator on how to set the standards. At any given time, the EPA staff may be working on some aspect of one or more of the NAAQS standards. The staff continually review health and environmental impacts of the pollutants identified in the Clean Air Act as NAAQS pollutants. During reconsideration of the 2008 standards, the EPA also held public hearings with a wide variety of stakeholders.

The EPA is always learning more about how to set air pollution standards. The Agency is using and will use some of the work from the reconsideration of the 2008 standards to help inform NAAQS decisions moving forward. The Agency is under a court-imposed deadline to determine what, if any, revision to the ozone standards may be appropriate in light of the current scientific evidence. For these reasons, it is difficult to estimate the expenses and full-time equivalent employees exclusively attributable to the reconsideration of the 2008 standards.

13. In 2011, when President Obama directed EPA to abandon its reconsideration of the ozone standard, he cited the importance of reducing burdens "particularly as our economy continues to recover." As EPA again reviews the Ozone NAAQS, how will EPA go about its work in a way that ensures that a new standard does not overburden a weakly recovering economy? As part of the upcoming ozone review, will EPA give serious consideration to keeping the existing standard in place? Is EPA concerned that it could set air standards so strict that manufacturing is driven off-shore to countries with few environmental laws?

EPA is prohibited by law from considering costs of implementation in setting NAAQS. The U.S. Supreme Court ruled in Whitman v. American Trucking Associations, 531 U.S. 457 (2001), that the EPA may not consider the costs of implementation in setting standards that are requisite to protect public health and welfare, as provided in section 109(b) of the Clean Air Act. However, the Clean Air Act gives state and local officials in nonattainment areas the ability to consider several factors, including employment impacts and costs of controls, when designing their state implementation plans to implement the NAAQS.

14. In November, I wrote EPA with concerns about the Brick MACT issue. My letter was joined by 17 other Senators, and we sent the letter in coordination with a bipartisan group comprised of 53 House members including Rep. Terri Sewell of Alabama. In my office, I talked with you about the status of EPA's Brick MACT proposal. You acknowledged the legitimate concerns of the brick manufacturers and said you are "looking closely" at this issue and that you "understand that many impacted are small businesses or family businesses." And you said EPA is "looking for every flexibility" and has provided "extra time" to make sure the right decisions are being made. I greatly appreciate your willingness to look closely at this issue. Please answer the following questions:

    a. As part of the Brick MACT process, is EPA evaluating all possible options for reducing the total, overall regulatory burden on brick makers?

    Yes, EPA is evaluating all possible options for reducing the regulatory burden on brick manufacturers.

b. What options does EPA have to ensure that the final rules are fair and cost-effective, and don't adversely impact jobs at family-owned brick plants?

EPA is considering a range of options to minimize the burden on small businesses.

c. I am told that a health-based Brick MACT rule, combined with a work practice rule for smaller emission sources, would enable EPA to set a clean and safe environmental standard, while also ensuring that the brick sector can follow the rules in a cost-effective manner. Do you agree, and do you believe EPA can come to a reasonable solution for this industry?

EPA is considering health-based standards and other regulatory flexibilities for proposed requirements to address the HAP emitted by the brick industry in a reasonable way.

d. What steps has EPA taken, since receiving our November letter, to address our concerns as EPA works towards its August 2014 deadline?

We completed the small business advocacy review (SBAR) panel process. Nearly 20 representatives of the brick industry participated in the SBAR process. We have taken into consideration their input and suggestions.

e. Are you and EPA staff engaged with the Brick Industry Association and other industry stakeholders regarding the development of the Brick MACT proposal? Please describe efforts taken by EPA to engage the brick industry stakeholders, both small and large businesses, to ensure you have the best information possible to develop your rule.

EPA has had numerous meetings and discussions with brick manufacturers and representatives of the Brick Industry Association. In addition to meetings with small businesses, we have also had separate meetings with the Brick Industry Association to exchange data and ensure that we have all of the information available.

f. Please describe the kinds of HAP emissions associated with the brick sector that EPA is seeking to control with new standards in the Brick MACT, along with the approximate percentage of total emissions comprised by each kind of emission.

Data provided to EPA by the Brick Industry indicates that HAP emissions from brick manufacturing are generally comprised of acid gases and hazardous metals. Acid gases represent the overwhelming majority of HAP emissions. HAP metals represent a smaller fraction of the total emissions but these metals are among the most toxic air pollutants covered by the Clean Air Act.

g. With respect to any particular HAP emission that comprises less than 5% of the overall total emissions from a brick plant, will EPA consider work practices as a viable means of MACT regulation? How does EPA intend to address these smaller emissions? Would it be appropriate for EPA, in an effort to control small levels of emissions for particular pollutants that comprise less than 5%, or even less than 1%, of overall emissions, to impose expensive new requirements that could ultimately render brick plants in the United States uneconomical?

EPA is considering all options that are legally permissible under the Clean Air Act. That said, we are required by the CAA to address emissions of all HAP emitted by the

industry. We will provide as much flexibility as possible as we develop proposal requirements for the brick industry to address their HAP emissions in a way that minimizes economic burden. This proposal will be published and made available for public comment, so that we can continue to receive input on it.

15. In our meeting, we talked at length about EPA's plans to regulate biogenic emissions. We talked about forest management in Alabama and around the country, and the pragmatic concerns that need to be given full consideration as EPA considers actions in this regard. However one feels about climate change, it is abundantly clear that forests are an asset, not a liability, when it comes to carbon dioxide. And I believe that our government policies should seek to encourage the use of wood, not discourage it with heavy-handed bureaucracy and regulations. You have agreed to work with me and other Senators on this issue. I look forward to that. If invited, would you be willing to meet with me, other Senators, and stakeholders to discuss EPA's plans for regulating biogenic emissions and related issues?

Yes.

16. We recently issued an EPW Minority Report on "Cooperative Federalism,"[2] which outlines many of the concerns raised by the States about EPA's recent actions. The report contains several interesting findings.

    a. The report found: "Since 2009, a majority of States have expressed concerns on a variety of fronts about EPA's failure to adhere to the [Clean Air Act's] cooperative federalism design." Were you aware that most states had raised these concerns?

        i. The report found: "Evidence suggests that EPA entered more 'sue and settle' agreements during this Administration's first term than all three previous presidential terms combined." Were you aware of that?

        ii. The report found: "The current Administration is rejecting an unprecedented number of State [Clean Air Act] Implementation Plan provisions..." Do you agree?

    b. The report also provides several recommendations for improving relations with the States on EPA Air issues. Will you review the report and consider ways to improve the cooperative relationship between EPA and the States?

    c. Recent EPA rulemakings have short-circuited the traditional role that the States play in the Clean Air Act cooperative federalism design. Is EPA committed to the primary role that the Clean Air Act guarantees States in setting performance standards for existing sources like power plants?

The Clean Air Act sets up a system of cooperative federalism where the EPA and the states work together to ensure that all Americans have safe, healthy air. We work closely with our State partners on a daily basis to implement the Clean Air Act's requirements, basing all of our decisions on sounds science and the law. At times, that requires that we respond to pending litigation or help the States improve on their work so that it satisfies the Act's

[2] The full report, "Neglecting a Cornerstone Principle of the Clean Air Act: President Obama's EPA Leaves States Behind," is available at http://www.epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=6ceef5b2-07ef-4f68-8938-d947f409019d

requirements. We're always looking for ways to improve the way in which we and our State partners work to implement the Act, and appreciate the suggestions in your report. Our proposed guidelines for existing power plants, published on June 18, lay out our views on the role of States under Section 111(d) of the Clean Air Act in detail.

Senator John Boozman

1. Do you support allowing the public to participate in the nomination process for Science Advisory Board Members and to provide public comments?

   The EPA's Science Advisory Board Staff Office is responsible for supporting three independent congressionally mandated Federal Advisory Committees that provide scientific and technical advice to the EPA Administrator, including the SAB. It is my understanding that the SAB Staff Office solicits nominations of experts for the SAB and other committees. For example, the SAB Staff Office published a Federal Register notice on April 18, 2014 requesting public nominations for the SAB and the Clean Air Scientific Advisory Committee (CASAC). The SAB Staff Office also provided the public an opportunity to comment on the nominations. More information can be found at http://www.epa.gov/sabstaff.

2. At times, SAB members have been involved both directly and indirectly in reviewing their own work. This violates principles outlined in the EPA's Peer Review Handbook. Do you agree that Board members should not participate in advisory activities that directly or indirectly involve review and evaluation of their own work?

   The EPA's Science Advisory Board Staff Office is responsible for supporting three independent congressionally mandated Federal Advisory Committees that provide scientific and technical advice to the EPA Administrator, including the SAB. The SAB maintains a central repository of information describing its processes, ethics, and other requirements for nominees and advisory committee members on its website. More information can be found at http://www.epa.gov/sabstaff.

3. Do you believe that Science Advisory Board members with dissenting views should be empowered to make those views known to the public and to the EPA Administrator?

   The EPA's Science Advisory Board Staff Office is responsible for supporting three independent congressionally mandated Federal Advisory Committees that provide scientific and technical advice to the EPA Administrator, including the SAB. The SAB maintains a central repository of information describing its processes, including procedures for committee members to express dissenting views and have those views considered in the development of the final report to the Administrator. More information can be found at http://www.epa.gov/sabstaff.

4. Risk or hazard assessments include many of the most significant and consequential scientific undertakings at the EPA. Do you believe that EPA's Science Advisory Boards should review each of these assessments and provide advice and comment?

   Decisions about any review of a risk or hazard assessment are made in accordance with EPA's Peer Review Policy and Peer Review Handbook, as well as the Office of Management and Budget Final Information Quality Bulletin for Peer Review (PRB) posted at the same website. These documents are available at http://www.epa.gov/peerreview. The Office of Air and Radiation nominates assessments for SAB review based on the criteria identified in these documents.

5. Do you believe that Science Advisory Boards should be limited from providing non-scientific policy advice?

The EPA's Science Advisory Board Staff Office is responsible for supporting three independent congressionally mandated Federal Advisory Committees that provide scientific and technical advice to the EPA Administrator, including the SAB. The Environmental Research, Development and Demonstration Authorization Act authorizes the SAB to provide scientific advice. More information can be found at http://www.epa.gov/sabstaff.

I also want to ask a few questions about the EPA's manipulative and dishonest Social Cost of Carbon (SCC) ESTIMATES. EPA is using a phony number to justify over two dozen rules. This phony number inflates the benefits of EPA rules, and the agency has not responded to oversight inquiries by members of this Committee.

6. Why did the Interagency Working Group (IWG) decide against including a 7 percent discount rate valuation, as required by the Office of Management and Budget (under Circular A-4)? Did EPA, as a participant in the IWG, agree with the decision to ignore OMB guidance and not include a 7 percent discount rate valuation? Please explain in detail.

7. Why did the Interagency Working Group (IWG) decide against including a domestic analysis of the SCC, thereby again ignoring OMB guidance requiring a distinction between the domestic costs/benefits and the global costs/benefits?

8. Did EPA, as a participant in the IWG, agree with the decision to ignore OMB guidance and not include a domestic analysis of the SCC?

9. Please explain in detail why an analysis of domestic compliance with EPA regulations which impacts all Americans was not necessary.

Response to Questions 6 – 9: EPA works with OMB to ensure that EPA is following guidance in assessing the costs and benefits of their agency actions. As explained below, both the use of a global value and the range of discount rates used for the SCC estimates are consistent with OMB guidance.

The OMB discount rates are designed for costs and benefits that occur in the near to medium term. Different considerations affect discount rates for impacts in the distant future. The 2010 TSD provides extensive discussion of the intergenerational discounting literature and why the three discount rates were chosen. The discount rate decisions are consistent with OMB guidance. Specifically, regarding intergenerational discounting, Circular A-4 says:

"...it would still be correct to discount future costs and consumption benefits generally (perhaps at a lower rate than for intra-generational analysis) ... Estimates of the appropriate discount rate appropriate in this case, from the 1990s, ranged from 1 to 3 percent per annum."

According to Circular A-4, the "7 percent rate is an estimate of the average before-tax rate of return to private capital in the U.S. economy," while 3 percent is "the rate at which society discounts future consumption flows to their present value." Both are designed for costs and benefits that occur in the near to medium term. The use of the 3% discount rate is also consistent with OMB guidance, because the IAMs used to generate the USG SCC estimates are designed to estimate change in future consumption equivalent flows, not

capital (or capital equivalent) costs. However, the interagency working group noted in the 2010 TSD that there is the possibility that "climate damages are positively correlated with market returns," which would tend to increase the certainty equivalent (consumption) discount rate, and the estimates therefore include an upper value of 5%.

Since the release of the February 2010 estimates, the federal government has continued to examine ways to discount impacts in the distant future and has supported research in this field. Notably, a recent paper in *Science* authored by thirteen prominent economists concludes that a declining discount rate would be appropriate to analyze impacts that occur far into the future.[3]

The interagency workgroup determined that a global measure of SCC is appropriate in this context because emissions of greenhouse gases contribute to damages around the world and the world's economies are now highly interconnected. To reflect the global nature of the problem, the USG SCC estimates incorporate the full damages caused by carbon dioxide emissions and we expect other governments to consider the global consequences of their greenhouse gas emissions when setting their own domestic policies. See 2010 TSD for more discussion.

On August 25, GAO released its review report of the process used to develop the U.S. Government Social Cost of Carbon. After interviews with scientists and officials who participated in the development of the SCC, including EPA staff, along with reviews of relevant technical documents, the GAO concluded that the working group (1) used consensus-based decision-making, (2) relied on existing academic literature and modeling, and (3) took steps to disclose limitations and incorporate new information by considering public comments and revising the estimates as updated research became available. The report made no recommendations.

10. Will agencies be instructed to estimate the harm to the U.S. economy as manufacturing shifts overseas, to countries that emit far more atmospheric pollution and carbon than our industries do?

In all of our significant rulemakings, the EPA uses the best peer-reviewed science and the best available information to estimate benefits and costs, including both quantifiable and unquantifiable benefits and costs. For those benefits and costs that the EPA is not able to quantify, the Regulatory Impact Analysis includes a robust qualitative discussion of the potential impacts of the regulation.

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[3] Arrow, K., M. Cropper, C. Gollier, B. Groom, G. Heal, R. Newell, W. Nordhaus, R. Pindyck, W. Pizer, P. Portney, T. Sterner, R.S.J. Tol, and M. Weitzman. 2013. Determining Benefits and Costs for Future Generations. *Science* 341(6144): 349–350.

Senator Deb Fischer

1. EPA will soon be announcing new proposed regulations regarding greenhouse gas emissions from existing power plants. Do commercially available technologies currently exist to capture and store carbon emissions at power plants?

   a. If yes, where? At what cost? Will vendors be able to deal with the demand created by the regulations?

   In the Clean Power Plan, EPA did not propose that retrofit carbon capture and storage is the "best system of emission reduction... adequately demonstrated" for reducing CO2 at existing power plants.

2. In the proposed rule for new power plants, EPA makes its "adequately demonstrated" determination predominantly based on carbon capture and sequestration (CCS) demonstration projects that have received federal assistance under the Energy Policy Act of 2005 (EPAct05). Notably, three of the four commercial scale CCS demonstration relied on by EPA have all been allocated an investment tax credit that was established for "clean coal facilities" under section 1307 of EPAct05. However, Congress has placed specific limitations on EPA's authority to set section 111 standards based on demonstration projects that receive federal assistance under these EPAct05 programs. Specifically, these statutory limitations expressly bar EPA from considering the three commercial-scale CCS demonstration projects in making a determination under section 111 that CCS is adequately demonstrated. Please explain why the agency is ignoring this statutory limitation in the pending New Source Performance Standard rulemaking.

   EPA does not believe that these provisions preclude its determination. EPA has issued a Notice of Data Availability (NODA) that notes the availability of a Technical Support Document (TSD), in the rulemaking docket that details its position on this issue. It explains, "EPA interprets these provisions to preclude EPA from relying solely on the experience of facilities that received EPAct05 assistance, but not to preclude EPA from relying on the experience of such facilities in conjunction with other information." Moreover, EPA based its determination on a number of projects and other information including projects that did not receive any assistance under the EPAct05. In addition, the agency extended the public comment period for January 2014 proposal by 60 days to allow adequate time for the public to review and comment on the contents of the NODA and TSD.

3. The power sector has announced the retirement of over 60 gigawatts of coal fired generation. This amounts to about 20 percent of the existing coal-fired generating capacity in the United States. These retirements will generally occur before 2020, with a great majority of the retirements occurring by the 2016 Mercury and Air Toxics Standards ("MATS") deadline. This loss of coal-fired capacity is likely to continue due to new EPA rules, including the new CO2 regulations for existing power plants, regulation of coal ash, and regional and local control measures required to attain the more stringent ozone and fine particulate matter standards. Furthermore, electric reliability problems posed by the continued loss of coal-fired capacity could be exacerbated by the retirement of baseload nuclear generation. The power sector faces major challenges as to how it will replace a large amount of coal and nuclear baseload capacity. Please explain how the agency intends to address this issue with regards to the upcoming section 111(d) rule, including the steps it plans to take to ensure the reliability of the grid.

a. When calculating future benefits of EPA's greenhouse gas rules for new and existing power plants, will your analysis take into account the future greenhouse gas reductions that may result from other EPA rules such as MATS or National Ambient Air Quality Standards?

b. Is there a risk that predicted emissions reductions could be double counted?

With an all-of-the-above approach, the Clean Power Plan encourages the growing shift toward a more sustainable system that recognizes the importance of reducing carbon pollution while maintaining reliability and a vibrant economy. Based on our analysis, we expect that coal, oil and natural gas will have an important role in a diverse U.S. energy mix for years to come. EPA projects that coal will have a 31% share of generation and natural gas will have a 32% share of generation in 2030. EPA's analysis shows that the proposed Clean Power Plan is unlikely to have any significant effect on electricity reliability. If a local reliability concern arises, EPA is confident that it can be managed with existing tools and processes – especially taking into consideration the timing and compliance flexibilities in the guidelines.

EPA estimates that the combined public health and climate benefits from the Clean Power Plan will be worth an estimated $55 billion to $93 billion in 2030. The public health and climate benefits are associated with emissions reductions achieved by the proposed rule alone. When EPA estimates the benefits for rules, we include other rules that place emissions limitations on sources, such as MATS, CAIR and various State programs, in the "baseline". This confirms that we have not double-counted any of the emissions, benefits or costs that should be attributed to another rule.

4. Are you concerned that utilities may be spending so much time and resources on keeping their existing coal units in compliance that they are not spending enough time and resources on new energy sources that will eventually lessen the dependence on coal?

With an all-of-the-above approach, the Clean Power Plan encourages the growing shift toward a more sustainable system that recognizes the importance of reducing carbon pollution while maintaining reliability and a vibrant economy. Based on our analysis, we expect that coal, oil and natural gas will have an important role in a diverse U.S. energy mix for years to come. EPA projects that coal will have a 31% share of generation and natural gas will have a 32% share of generation in 2030.

States will have fifteen years from when the rule is final until compliance with the final target, time in which to plan for and achieve reductions in carbon pollution and avoid stranded assets.

5. What are your views on retrofitting plants?

In the Clean Power Plan, EPA did not propose that retrofit carbon capture and storage is the "best system ... adequately demonstrated" for reducing CO2 at existing power plants.

6. Are you concerned about the amount of money being spent on retrofitting plants?

In the Clean Power Plan, EPA did not propose that retrofit carbon capture and storage is the "best system of emission reduction... adequately demonstrated" for reducing CO2 at existing power plants.

7. The EPA has issued a number of new regulations regarding emissions from electric generating units. What is the EPA's ultimate goal? Is the EPA trying to force utilities to take coal-fired power plants out of operation?

EPA's mission is to protect human health and the environment. The proposed limits on carbon pollution from new and existing power plants are intended to implement the provisions of the Clean Air Act in a way that takes into account costs as appropriate, and the EPA expects that they will result in a continued diverse fuel mix.

8. Is it fair to say that EPA would like to see the United States lessen its dependence on coal for electricity production?

EPA is implementing the provisions of the Clean Air Act to reduce harmful air pollution from electricity production, while still maintaining a diverse energy supply that includes an important role for coal and natural gas.

9. One significant concern in the electric utility industry is regulatory certainty, but we consistently see rules overturned in the courts or delayed numerous times during the rulemaking process, ultimately dragging the process out for years in some instances. With the host of rules being promulgated and expected in the near future, what are you doing to stop this cycle and at the same time ensure legally defensible, cost-effective rules that successfully protect human health and the environment?

Any rule the EPA promulgates must be based on sound science and be legally sound, including complying with all applicable laws and regulations. If confirmed, I will continue this commitment as the foundation of any rules developed by the Office of Air and Radiation.

10. You have consistently said you believe nuclear power is an important part of the nation's climate solution. With the announced closure of a number of nuclear reactors in the last year or so, what is EPA doing to ensure the reliability of the grid?

EPA's Clean Air Act power plant rules provide flexibility to regulated entities to help ensure a path forward for generating units of all types. EPA works closely with DOE, FERC, grid planning authorities and other entities with expertise related to electric reliability to help ensure that the agency's rules are implemented in a manner consistent with maintaining electric reliability.

11. It is my understanding EPA takes into consideration the costs and benefits of much of its rulemaking activities, but uses Energy Information Administration data that may not capture a complete picture of the future energy landscape. With the long list of pending EPA regulatory actions, does your rulemaking process take into consideration costs and benefits beyond the EIA baseline? That is to say does EPA consider for example the greenhouse gas effects when finalizing the 316(b) cooling water intake structures regulation?

For each of EPA's major rulemakings, we include a regulatory impact analysis – both at the proposed rule stage, and at the final rule stage – in which we describe in detail how a particular rulemaking takes into account costs and benefits.

12. Funding for mitigation activities related to ozone is currently tied to "non-attainment" status. Therefore, communities such as the Omaha metro area that are currently in "attainment," but are trying to be pro-active and address ozone-forming emissions prior to violating air quality standards have little financial assistance available. This places communities in the unenviable situation of having to violate air standards in order to become eligible for additional funding. EPA recently developed the Ozone Advance program to attempt to provide funds for metro areas, such as the Omaha region. Would you take proactive measures, such as participation in Ozone Advance, into consideration when designating whether a region will be deemed "non-attainment"? And would you champion opportunities to provide funding for communities that are in attainment?

    Participation in Ozone Advance can help areas maintain air quality that meets the health standards. EPA is currently providing technical assistance to participants in the Advance Program but has not offered direct funding to participants. However, I have been and will continue to be a strong advocate for providing support at the community level, including EPA assistance and funding, to the extent possible given budget constraints. EPA can consider participation in such programs in discretionary decisions whether to redesignate areas, but must make mandatory initial designations based on existing air quality.

13. High ozone formation frequently occurs as a result of natural processes (heat, lack of wind, etc.) that are beyond human control. Emissions traveling from other metro areas can also have an impact. For instance, in the Omaha metro area, one can track a direct correlation between the number of high ozone days and extreme high temperature days, whereas mild summers usually result in few, if any, high ozone days. We also have annual burns that occur in the Flint Hills in Kansas that appear to contribute air quality problems. It is unfair to punish communities for factors that are beyond their control. How would EPA take into account factors that are beyond a region's control when designating attainment and non-attainment areas?

    In most places in the United States, ozone produced from anthropogenic emission sources within the United States is the primary cause of elevated ozone levels. Local and regional controls are the most effective means to reduce ozone levels for these types of sources. However, the Clean Air Act provides three mechanisms which the EPA and air agencies may be able to use during the NAAQS implementation process to prevent unintended regulatory outcomes or reduce the regulatory burden arising from qualifying events or situations that cause elevated ozone concentrations but are beyond human control: (1) the Exceptional Events Rule; (2) section 179B attainment demonstration approvals; and (3) rural transport area ozone classifications all have potential application in ensuring ozone from natural sources is appropriately handled in implementation of the NAAQS. EPA will use each of these approaches as appropriate to ensure that ineffective local controls are not required in areas overwhelmingly influenced by ozone created from sources beyond their control.

    The Exceptional Events Rule establishes criteria by which air quality data affected by uncontrollable events (such as stratospheric ozone intrusions or wildfires, whether originating in the United States or internationally) can be excluded from regulatory actions, including initial area designations. Routine weather conditions (i.e., high temperatures and stagnant conditions during the ozone season) would generally not be considered exceptional. The EPA is currently developing Exceptional Event Rule revisions, which we anticipate proposing in mid-2015 and promulgating in mid-2016. This revised schedule will get a rule in place prior to state implementation activities associated with potential future NAAQS revisions.

Section 179B in the Clean Air Act addresses international transport issues and provides some relief from state planning and control requirements for qualifying nonattainment areas whose projected air quality or air quality on the attainment deadline date would meet the NAAQS "but for" emissions from another country. In these areas, EPA can approve a state's attainment plan and avoid the consequences of a finding of failure to attain. For ozone, a state could avoid reclassification and section 185 fee programs.

A rural transport area (RTA) classification allows nonattainment areas to apply marginal area requirements if the area is not part of a metropolitan area and can show that emissions from within the area do not make a significant contribution to ozone levels within the area or in another downwind area.

14. The EPA Clean Air Scientific Advisory Committee (CASAC) last recommended the ozone standard be set at a range between 60 and 70 parts per billion (ppb). If the standard were set at 60 parts per billion, the vast majority of the United States—including the Nebraska Panhandle (due to emissions from the Denver metro area), one of the most sparsely populated regions of the United States—would be in violation of the standard. Many metro areas who struggled for years to attain the standard set in 1997 now feel as though the standard will be set at an unrealistic level that will only result in perpetual non-attainment status. How would you apply common sense and reasonableness in setting air quality standards? Do you think that there are diminishing returns of further reducing air quality standards past a certain point?

The Clean Air Act directs EPA to set national ambient air quality standards at a level requisite to protect public health and public welfare. These standards are based on consideration of the most up-to-date scientific evidence and technical information, advice from CASAC, and public comments. As part of the ongoing review of the ozone NAAQS, EPA will evaluate the extent to which it is appropriate to revise these standards in order to protect against adverse public health and welfare effects.

The EPA is prohibited by law from considering costs of implementation in setting NAAQS. The U.S. Supreme Court ruled in Whitman v. American Trucking Associations, 531 U.S. 457 (2001), that the EPA may not consider the costs of implementation in setting standards that are requisite to protect public health and welfare, as provided in section 109(b) of the Clean Air Act. However, the Clean Air Act gives state and local officials in nonattainment areas the ability to consider several factors, including employment impacts and costs of controls, when designing their state implementation plans to implement the NAAQS.

If the EPA establishes a revised ozone NAAQS, the EPA would explore common sense implementation approaches to maximize flexibilities and minimize burdens for states, while providing the health and environmental protections required under the CAA.

15. Last November, the EPA proposed Renewable Fuel Standard targets for 2014 that would blend less fuel than we blended last year, impacting the economy in Nebraska. It does so using an approach that I find to be inconsistent with the law and previous regulations by inserting considerations about fuel delivery infrastructure into the annual target setting process. What steps is EPA taking to fix this proposed rule and respond to the hundreds of thousands of comments submitted for your consideration? When do you expect the final rule to be released?

The EPA has evaluated and considered the over 300,000 comments we received on the 2014 RFS proposal in developing the draft final rule currently under interagency review. Since

the proposal was released, we have also met with multiple stakeholders to listen to their input on the proposed rule and to solicit any new and relevant data that should be factored into setting the volume standards for 2014. These stakeholders include representatives from the biofuel sector, the agricultural sector, petroleum refiners, environmental groups, and other organizations and sectors. We anticipate issuing a final rule as soon as possible.

16. Do you believe the RFS allows for a waiver of biofuel volumes based on retail refueling infrastructure?

Section 211(o)(7) of the Clean Air Act contains two waiver authorities of relevance for the 2014 RFS rulemaking. First, Section 211(o)(7)(D)(i) provides that the EPA must project cellulosic biofuel production on an annual basis, and if that projected level is lower than the applicable volume set forth in the statute, the EPA is to reduce the applicable cellulosic biofuel volume to that lower projected level. When the EPA does so, the EPA may also reduce the applicable volume of renewable fuel and advanced biofuel by the same or a lesser volume. This authority was recently discussed in Monroe v. EPA, 750 F.3d 909 (DC Cir., May 6, 2014), where the Court noted that the statute does not specify factors for the EPA to consider in exercising this authority and, therefore, that the EPA "enjoys broad discretion regarding whether and in what circumstances to reduce the advanced biofuel and total renewable fuel volumes" under this provision.

In the proposed rule for the 2014 RFS volumes, the EPA proposed to reduce the statutory applicable volumes of advanced biofuel and renewable fuel by using a combination of these two authorities. The EPA explained in the proposed rule that both authorities may be used to address limitations in production or importation of the necessary renewable fuel volumes, and factors that limit supplying those volumes to the vehicles that can consume them.

17. Do you think it is the right policy to move the RFS blending targets backward?

EPA is committed to implementing the RFS in a way that encourages increasing volumes of biofuels. The increased use of biofuels is playing an important part in helping to move the country towards greater energy independence and security, while at the same time helping to reduce greenhouse gas emissions. The proposed 2014 volumes were based on an estimate of all ethanol that could be reasonably be expected to be consumed in 2014, including considerable growth in the assumed consumption of E85 in FFVs compared to 2013. As a result, the proposed volumes are beyond the estimated E10 blendwall. The proposed 2014 volumes also included all cellulosic biofuel and all non-ethanol advanced biofuel projected to be reasonably available in 2014. As the use of renewable fuels continues to rise, the infrastructure necessary to support them will continue to expand as well. The EPA has evaluated and considered all comments it received on the proposed rule in preparing the draft final rule establishing the 2014 RFS standards. The draft final rule is currently under interagency review.

18. Do you believe that the EPA can perform any regulatory actions to make it easier for fueling stations to offer E15?

The EPA has taken a series of regulatory steps to enable E15 to be sold in the U.S. In 2010 and 2011, the EPA issued partial waivers to enable use of E15 in model year 2001 and newer passenger vehicles, and in June 2011, the EPA finalized regulations to prevent misfueling of vehicles, engines and equipment not covered by the partial waiver decisions.

In the proposed rule for the 2014 RFS volumes, we noted that there remain a number of obstacles to increased E15 consumption, and we requested comment on what actions, on the part of government as well as industry and other stakeholders, could be taken to overcome these obstacles and to enable E15 consumption to increase. The EPA is reviewing these comments and may take action in the future based on feedback received from stakeholders.